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ABSTRACT

With its sixth meeting, the National Commission on New Technological Uses of Copyrighted Works (CONTU) switched from substance to verbatim minutes. The first report, made by the president of the Computer and Business Equipment Manufacturers Association, dealt with the copyrightability or patentability of computer programs, protecting investments in computer software, what constitutes a copy of a computer program, enforcement problems, fair use, effects of copyrights on software producers and users, and copyright notices and deposits. Testimony from the American Federation of Information Processing Societies and affiliates, representing the views of software authors and users, covered subjects substantially similar to those of the first report. Commission discussions of the testimony and future business followed. (LS)

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NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES

OF COPYRIGHTED WORKS

ROOM 910

CONTU Conference Room

1921 Jefferson Davis Highway

Arlington, Virginia

Thursday

May 6th, 1976

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JUDGE FULD: This is the sixth meeting of CONTU, and I welcome our fellow Commissioners and all those who are here as visitors and participants.

May I call on you, Mr. Levine, for opening remarks.

MR. LEVINE: Yes. Thank you.

I would like to welcome everyone to the first meeting of CONTU in our own conference room.

The CONTU offices for those of you who have not been around are in the southwest corner of this floor.

If any of you need to make phone calls back to your offices outside of the city, you can use the FTS number and our secretaries will help you with that.

We will have a break in the morning's activities later, and everyone is invited to go around to the offices for coffee.

The agenda for this morning has been changed slightly.

The General Services Administration, which had indicated that it would be making a presentation, has not as yet formulated its position on computer software. It is in the process, I understand, of doing so. They will not be testifying this morning. They were scheduled to testify at 11 a. m.

At that time if Ms. Ringer is available, she has

agreed to bring us up to date on the current status of the Revision Bill. And then at the end of that we will have our luncheon, and continue in the afternoon at 1:30.

On the question of the Library Photocopying Section 108-G-2, the staff has sent a letter to the identifiable interested parties requesting suggestions for guidelines from them to be submitted by May 10th.

One of the major library associations, and the authors and publishers have indicated that they would not be able to comply with our request by May 10th, and have asked for May 23d or 24th as the date for submitting their comments.

If there are no objections, I would suggest that we indicate to them that that is fine, and we will send out a mail gram to the other persons that we have sent letters to indicating that their comments can be held until that date as well.

JUDGE FULD: I think there is no objection to that procedure.

MR. LACY: Mr. Chairman, I had some discussions with some publishers at the Publishers Association meeting last week, and one of the reasons for their request for the delay was partly that they were having a convention last week and did not have the time to devote to it, and partly, I think, because they were under the impression that the Commission

wanted quite specific guidelines and suggestions of how many copies of this or that would constitute a sufficient number and so on, which would take rather lengthy discussions to arrive at.

And also I think there was some feeling on their part that there might be premature fixed positions lighting on some of those areas.

I have had the impression that what we were requesting them to do initially was primarily to indicate the objects to be served by guidelines, what we wanted to come out or what needed protection in the one case or assurances of access on the other with a great deal of flexibility left for discussion as to specific ways of achieving these goals. And I would think that it would make it easier for both groups to come up with guidelines if this sort of generality were emphasized as to what we are after. And we are not asking either group to commit itself, or any group if there are more than two, to commit itself firmly with this or that specific hard number as the thing. I think the early insistence on a firm commitment tends to polarize positions.

JUDGE FULD: You think they should be more general in direction?

MR. LACY: I think since you are coming back to them anyway if we emphasize ^{that} what we really want to know is what we want to achieve in these guidelines, what are the goals, what are we after; I think it would be easier to come up with maybe more flexibility.

JUDGE FULD: That sounds reasonable and sensible.

Is there anyone else who --

MR. LACY: It is the sort of thing you could do maybe informally over the telephone.

MR. HERSEY: Well, I agree, Mr. Chairman, with that.

I am also reminded that we have four months in which to accomplish something very complicated, and the further along we get into this first stage would simplify it.

JUDGE FULD: That reflects the thinking of all of us. I imagine.

You will take care of that (addressing Mr. Levine).

JUDGE FULD: Anything else?

MR. LEVINE: Yes.

I was just told that Ms. Ringer would not be able to make it this morning and, therefore, we will have after the break, the tape and slide presentation on the operation of the

British Library Lending Division which was scheduled for the end of the day, we will shift then to the last item on the agenda this morning.

JUDGE FULD: The last?

MR. LEVINE: It is just a tape and slide that we have.

MR. MILLER: Will Barbara be able to visit with us later?

MR. LEVINE: She will not be here today. I know tomorrow morning the House Subcommittee is marking up Section 111 on CATV. She'll be in on that. She had hoped to be here for all the Commission discussions, and I think she will be able to make it maybe tomorrow afternoon.

I appreciate the effort that those who have come to testify on rather short notice for preparing positions and testimony.

We have gotten indications that there are others who wish to^{be} heard and/or submit written presentations on the computer software issue.

To that end I would suggest to the Commission that the record be held open at least until July 31st for written presentations on computer software.

We are hoping that if there is interest we will have an additional two days' of testimony in June on computer software.

JUDGE FULD: No objection.

MR. LEVINE: Without objection we will proceed.

JUDGE FULD: We will proceed.

MR. LEVINE: In that connection I have left with you a schedule for June, and if you could fill that out for me before the end of today I would appreciate it so we can schedule, reschedule perhaps, for June.

MR. NIMMER: Do you know whether the missing Commissioners are going to be here?

MR. LEVINE: Mr. Sarbin, I don't believe, will be here. Mr. Wedgeworth will not be here. Mr. Perle I had expected. Ms. Karpatkin I had expected. And I don't know who else isn't here. Bill Dix, as far as I understood, was to have been here.

JUDGE FULD: Does that complete your discussion?

MR. HERSEY: May we assume that the June meeting will be in Washington?

MR. LEVINE: Yes. That is the assumption at this point. It is urgent that we make the arrangements as soon as

possible because Washington is becoming a city that is very difficult to make hotel reservations in.

JUDGE FULD: You mentioned the desirability of getting different dates in June.

MR. LEVINE: Well, we are scheduled presently for June 3d and 4th. I think that we will not be meeting in July or August; therefore, if we can reschedule the June meeting for later in the month it would both give us --

JUDGE FULD: We will take that up later?

MR. LEVINE: Yes.

MR. MILLER: We have in the past discussed the possibility of a West Coast meeting. I raise this simply because from June 18th on so on I happen to be on the West Coast, and could not attend on the East Coast but I could attend on the West Coast.

MR. LEVINE: Fine.

JUDGE FULD: Do you suggest that we meet on the West Coast? We will discuss that later.

We have representatives here from the Computer and Business Equipment Manufacturers Association who are going to address us.

Are you Mr. McCloskey?

MR. McCLOSKEY: Yes.

JUDGE FULD: Mr. McCloskey is the President of CBEMA. We welcome you and thank you for your attendance.

MR. McCLOSKEY: Thank you.

I am Peter F. McCloskey, President of the Computer and Business Equipment Manufacturers Association. With me today is Oliver R. Smoot, who is the Vice President of CBEMA and Staff Director of our Proprietary Rights Committee. First, I will describe our Association to you in general terms, and then I will address the questions that you specifically posed to us.

CBEMA is a trade association. It was founded in 1916 as the Office Equipment Manufacturers Institute. Since that time the Association has evolved over the past 60 years to represent the changing needs of our members. Currently we have 42 members. Last year the combined revenues of our member companies rose to 32.7 billion dollars. The companies range in size from major manufacturers of computer systems and office products to companies just entering these markets. As our name indicates, all CBEMA members "manufacture" computer or business equipment products. While this term is quite broad, it has not been interpreted to include companies who are

exclusively in the software business. We do have a requirement that they be manufacturers of hardware.

Members typically provide complete offerings of programs to compliment their hardware offerings such as systems control programs; programming language compilers; utility programs, such as sorts; application programs of general use (for example, payroll) and applications programs for inventory control and the like; and applications programs of special use which are the result of a special development contract perhaps between the user and the supplier. In some cases selection of program products is ^{by} a major user. In other the user may not be expected to alter the programs provided, but instead, use the system as programmed or as preprogrammed. In any case, the programs provided represent a significant investment by the manufacturer.

CBEMA members use varied techniques to market their programs. These range from providing programs as a "bundled" part of the computer system to the individual leases with licenses. An increasingly large number of our members are using copyright protection for their software products consequent to the release of Circular 61.

I will turn now to the nine questions you addressed to

us. I believe the most efficient approach will be to address them in the order presented except that I have combined my comments on Questions 6 and 9. However, you will have noted that we included in our written comments our comprehensive position on the Copyright Revision Bills themselves. I note in particular that we propose inclusion of copyright treatment for data bases consistent with that for computer programs.

We believe computer programs are currently copyrightable and that they will be properly copyrightable under the terms of Senate 22 and House Resolution 2223. Not only that, CBEMA believes computer programs should be explicitly declared copyrightable. Copyright is particularly apropos as a protection mechanism for computer programs because programming involves the writing of an author and because the primary exposure for the proprietor is the ease of copying by others. Unlike most other objects of property which involve some investment to "reverse engineer" and to manufacture, programs are readily duplicable with essentially no effort or investment. Without legal protection, such as copyright, the proprietor of a program is literally at the mercy of anyone with an office copier or a machine-readable media duplicator such as a computer.

Whether, or to what extent, computer programs are

patentable is presently unclear. In two instances, the Benson and Tabbot and Johnston cases, CBEMA has encouraged a definitive judicial decision on this point. We have been disappointed but, even if computer programs were patentable, patents would not be an effective mode of protection for the majority of computer programs. Like most products, few programs appear to meet the tests of novelty and unobviousness required by the patent laws. The great majority that do not meet these tests still involve substantial investment and creativity in the program development, and therefore they must be protected against misappropriation, and we think copyright is the right way.

MR. NIMMER: Mr. Chairman, is it appropriate to ask questions during the presentation?

JUDGE FULD: I think it might. If you don't mind.

MR. McCLOSEKY: I have no objection.

MR. NIMMER: May I inquire along the following lines on copyright? I don't profess to be at all an expert in the area of programs, but I try to understand what essentially a computer program is, and then to translate it into a completely non-computer context.

Suppose the following: suppose I were to say to

someone, "Look, I think it would be a good idea to write a book, a 'Who's Who of the Outstanding Lawyers in the Country'.

"So I want you to make an evaluation of who are the 100 top lawyers in the country, and give me a biography of each of them."

If that is all I say, I think it is pretty clear that it is an idea, and I cannot claim a copyright on that idea. Anyone else who has that idea can likewise do a Who's Who of the 100 top lawyers in their opinion.

Once we have the final book, though, the 100 top lawyers, that book as a compilation is protectable, but the idea of selecting the 100 top lawyers is not protectable.

And suppose I say further, "I don't want you just to use your opinion as to who the 100 top lawyers are. I want you to go into the court records and find which lawyers have the highest batting average in terms of winning cases, and pick out in that way the 100 top lawyers."

And I might even go further and say, "Make a distinction between those who win cases with defendants who have never been convicted before, and those who win cases with defendants who have a prior record, and give ten points higher to those lawyers who win, notwithstanding they represent defendants

who have been convicted in the past." Some kind of formula that I am suggesting to him.

"Do that. Follow these instructions and write such a book."

Would you say that if I make that kind of ^{formula} instead of just saying, "Use your own judgment," I give him some guidelines as to how to decide who the top lawyers are along the lines I suggested, should that be copyrightable?

MR. McCLOSKEY: Not just your basic outline of how to proceed, but once the programmer or systems analyst takes those instructions --

MR. NIMMER: I want to take it out of programming.

Let's pretend the computer has never been invented. I am just giving specific instructions on how to pick the top lawyers, and I have worked out a formula, but you don't use a computer. You have to go and search the court records and actually figure it out based upon my formula. Should that be protectable?

MR. McCLOSKEY: The idea or the writing down of those instructions?

MR. NIMMER: Well, I write down the instructions.

I say, "Look, go to the court records, find out who

has won what cases, figure out the average, take the highest, give ten points extra depending upon the past record of the defendant."

These are my instructions. Is that protectable? Should it be? Not is it, but should it be?

MR. McCLOSKEY: I don't think the idea should be. I would suppose that it may depend on the extent and detail of the questions in their written form, whether the questions themselves might be copyrightable.

MR. NIMMER: You mean it may be -- that I could stop someone from reproducing my words as such --

MR. McCLOSKEY: Right.

MR. NIMMER: -- but should I be able to stop someone from looking at my words and actually going to the court record and doing what I told my man to do?

MR. McCLOSKEY: I don't believe so.

MR. NIMMER: All right. Then it may well be my lack of understanding of computers, but how is it different if instead of giving those instructions to a human being, I give those instructions to the machine? Is it different or not?

MR. McCLOSKEY: No. Before you can give them to the machine, someone has to write them down. At some point it

does become a written record.

MR. NIMMER: Well, but I have written it down myself, not in technical language, but I have written it down, and we have agreed that that should not prohibit anyone from doing what I told my man to do with my written instructions.

MR. McCLOSKEY: No, but we said that he can't take what you have done and sell that to someone else, your written instructions.

MR. NIMMER: The actual writing per se, but suppose somebody sees my instructions and puts it in his own words?

MR. McCLOSKEY: You have no problem with that.

The analogy is closer to taking your instructions and then someone else selling those instructions to someone else, because that is all the computer program is, its instructions to the computer, and how it is physically written down, that is what we are trying to protect.

MR. NIMMER: I don't want to prolong this, but if someone is taking the same steps that I have enumerated, but not my language --

MR. McCLOSKEY: We are not protecting the algorithm. We are not protecting the approach. We are protecting the specific implementation.

MR. NIMMER: Thank you.

MR. LEVINE: Let me follow just briefly on that.

Can the same steps be taken using different computer language? In other words, can you track my computer program and use your own computer language in such a way using the same analogy of the same language?

MR. McCLOSKEY: I think if there were a mere substitution of my code words with different code words that that would just be a subterfuge for copying the computer program.

You would have none of your own expression involved. You would not have created the format. You would not have created the approach. You would just have substituted different words for the same meaning.

MR. MILLER: Then how is the second-comer to the program, that is, ^{to} the series of rules by which the machine will achieve an objective, to achieve the same objective once he or she has seen the first program which you wanted copyrighted?

MR. McCLOSKEY: Well, it is similar to, if you have an author who had written a book, you couldn't just change the names of all the characters in the book, and state that he had done --

MR. MILLER: If I want to write a second story about

star-crossed lovers, having read ROMEO AND JULIET, the English language is rich enough for me to do that in a multitude of forms, thousands, and perhaps millions as Leonard Bernstein has demonstrated. But if I want to have a machine handle payrolls or control inventory, isn't it true that the linguistics of instructing a computer to achieve that result are much more constricted, and mathematically there are just fewer numbers of ways to articulate those instructions to that machine?

MR. McCLOSKEY: They are fewer, but they are plentiful.

In other words, while it is not as unlimited as your fertile imagination may let run, you do have to finally come up with the same end result in specific areas. You have to get the right pay, and the right withholding taxes. You have many ways to arrive at doing that, and what we are concerned about is --

MR. MILLER: By "many," do you mean thousands?

MR. McCLOSKEY: Sure. You can take certain steps ahead of others. You can do them later. You can, depending --

MR. MILLER: Depending --

MR. McCLOSKEY: You can use the computer to add in different ways to subtract, almost, you know, just virtually

— limitless in terms of the permutations that you could use.

MR. MILLER: That is what I am having difficulty seeing.

MR. McCLOSKEY: The major development in a computer program involves the writing of the program and then the debugging of it to get all the errors out of the program, to make it work under all possible circumstances. So that under every case the computer will be able to handle the problem. And it is that correcting it for all errors, allowing for all cases, where the major investment is made, and once that is made if someone is able to profit from that experience specifically,

just by strictly copying or changing the cast of characters but not the exact steps that it went through, then you would have someone profiting from someone else's work product.

MR. MILLER: Well, surely the copyright regime is not designed as a policy statement that everyone in society must reinvent the wheel. Certainly a certain degree of the first developer's work goes into the public domain and becomes available to the second developer.

— Now trying to figure out how to space the programs so that rational courts or rational legislatures can decide that the second program does not infringe on the first program

— is a significant problem, because if we require too much re-modulation by the second-comer, we are producing economic waste and we are producing a situation in which you are inviting litigation, and in which the first-comer has a certain value to the copyright.

The closest case I can think of -- I am sure Mel may or may not agree with me -- a case involving these gas station games or these, you know, Social Security number games, in which the first-comer to the game writes a set of rules for playing, and then the second-comer to the game writes another set of rules which have a striking similarity to the first set of rules.

The court in that case held, "There are just so many ways you can write rules for this particular simple game, and if we award a copyright to the first-comer to the game then, in effect, we are monopolizing the game, not the expression of the rules for the game."

And I think that is what Mel is worried about, and that is what I am worried about in terms of recognizing a copyrighting program that goes beyond dubbing or copying. — And that is where we need help -- that is where I need help.

MR. McCLOSKEY: Well, I think that it would be obvious

to one who is trained in the programming languages and arts, who looked at a program that had a sufficient number of steps in the program to make a determination that someone has actually transliterated the program rather than just used the same idea and came to the same result.

I don't think that would be as practical a problem for adjudication as you may imagine. Programs have a vast number of steps and there are many, many ways that you can go from here to there, still incorporating almost all of the significant ideas, and we are not trying to protect the idea. We are only trying to protect the expression, the particular expression in that program. And that expression had great investment in terms of making it work effectively with the computer, and that is where the investment goes.

The typical business applications that go on a computer have been done by man manually for years, so really all you are doing when you put it on a computer, you are not coming up with a new idea, but you are coming up with a particular expression. You put out a major investment in assuring that it works successfully, and there should be some premium attached to that. It should not be available to anybody to copy on a ready-made basis, and I think there are ways where

you can assure that that can be prevented under the Copyright Law without putting unreasonable burdens on juries or judges.

MR. NIMMER: If I may pick it up for a moment.

One of the concerns I certainly do share with Professor Miller is this question, "Are there only a limited number of ways of signing it or is there only one way?"

Assuming not, assuming that there are a number of ways, still, Mr. McCloskey, as I follow what you are saying, you are saying that you are equating the matter of expression with the order of the steps, because you said a few times you could do it in a different order, if I understand what you are saying.

But that query whether that is or should be protectable, that is back to my example, if I say to my man, "First go to the courthouse. Then go to the recording room where they have all the cases listed. Then look at Line 32 of a given form which will show who won. Then mark an X in Column A if the person won ; mark an X in Column B if he lost."

I trace these various steps in reaching the evaluation of the 100 top lawyers.

Somebody else can certainly say what I have said in different words, but the order of the steps, "First go to the

courthouse. Then go to the courthouse record room," et cetera, are you saying that that order of those steps quite apart from the language I use, the order of the steps should be protectable, and that somebody else would have to suggest a different order in order to avoid infringement?

MR. McCLOSKEY: No. I am saying that really the order of the steps is just one indication whether or not someone has used yours in toto or whether ^{he} has ab initio done it on his own.

MR. NIMMER: Well, I am assuming now there is a copy of my steps. Different language completely. Instead of going to the courthouse, it says, "Go to the place where trials are held." The language is totally different, but the steps are the same.

MR. McCLOSKEY: Well, let me put it a different way then.

If we had a thousand programmers that were programming a typical application, and that application was sufficiently long so that there were more than ten steps in the program. It was, let's say, a 10,000 instruction program. None of them would be the same. There would be different approaches as to how to do it.

MR. NIMMER: That may well be, but suppose they take my order. Clearly there is copying; no question about it. The question is, should I be able to protect the steps that I suggested in evaluating who are the top lawyers?

I am not suggesting the answer, maybe I should be able to protect that, but is that essentially what you are saying, that the steps involved are protected?

MR. McCLOSKEY: I think the distinction between your instructions to somebody else and what somebody else did with those instructions, if somebody were to say, "I would like to take your instructions and sell them to someone else." All right?

"Sell your instructions." You have written them down, and he says, "That is not a bad way. I am going to take that." You could have copyrighted those instructions. Now if somebody takes those instructions and does something, and he documents exactly what he did, his work product should be copyrightable.

MR. NIMMER: But the first one looks at my instructions and puts it completely in his own words, but he keeps the same essential steps, apart from whether he could copyright it, it is an infringement of my copyright.

MR. McCLOSKEY: You say all the essential elements are there. No, that is not what we are referring to, not generally speaking.

MR. NIMMER: It is just the manner of expressing --

MR. McCLOSKEY: Manner of expression. Manner of expression.

MR. APPLEBAUM: Mr. McCloskey, would you be more comfortable with an analogy of direction being given to a pianist who performed a piece for a player-piano roll, something that is programmed, and drives an instrument and comes out with an end product, and somebody else giving similar directions to another person to produce a player-piano roll to produce an end product that in effect is a different creation.

Would this be a more comfortable analogy for you to work with?

MR. McCLOSKEY: Well, I see the difference. I think both end products should be protected. I don't see that one is the same as the other. However, if he listened to the other and the melody came out exactly the same, then I would say we have some problems.

JUDGE FULD: I think we have exhausted the subject.

MR. McCLOSKEY: And then (continuing) we do feel that we need copyright protection for substantial investments made in computer programs, particularly because misappropriation of a program is much easier than a physical product, and since it may be accomplished by copying. Therefore, we urge that consideration be given to the enhancement of copyright protection of programs irrespective of whether programs are to be protected by patents.

Our position is that computer software should be treated as much like analogous copyrighted works as possible. Thus, we recommend that the length of time for copyright protection should be the usual time provided by the Copyright Law or the law to be enacted. There is no need to set a different time period; it would needlessly make things more complex. The more successful programs may be used for many years. Addition of further functions and/or adaptation to new computers and/or operating systems further insures the usefulness of proven programs will continue over the years. If future experience proves this expectation incorrect, the law can be amended in the light of experience under the law.

One of the current objects of copyright similar to computer programs is, as was suggested, musical and also dramatic

works because both are "performed." Thus, we urge that copy-right protection of computer software should not be limited to the right to make and vend copies of the program. Effective utilization of programs in commerce requires that proprietors be free to treat their programs like other objects of property, without resorting to special protection techniques such as trade secrets, restrictive contracts, et cetera. Those forms of marketing such as sale of copies should be available without risk of loss. A single program copy, once sold, can pass through many hands, and some means must be provided for preventing it from being effectively copied by each holder through being input into his computer where an executable copy would continue to reside after the original program copy is passed on.

JUDGE FULD: How would that be enforced?

MR. McCLOSKEY: Well, we want to give him the right to use that program in the computer, and when it is in the computer memory that is a permissible use, but we don't want it --

JUDGE FULD: How would it be supervised if it is violated in this context?

MR. McCLOSKEY: Well, what we are trying to do is

to prevent the passing on of the actual computer^{program,} the media that it was sold in, a computer program. So that once somebody had it he could put it in his computer and say, "This piece, this tape was contained in the computer program, and that is how I bought it, I can give^{it} to someone else."

So it would only go with the one who purchased it, not if it was passed on.

MR. MILLER: You mean if I buy a program I cannot lend it to someone?

MR. McCLOSKEY: Normally to use, to reproduce, to what, to read, yes.

MR. MILLER: To use in my friend's computer.

MR. SMOOT: You said you bought a computer program?

MR. MILLER: I bought a program, and I want to lend it to my friend who happens to have a compatible machine.

MR. McCLOSKEY: Would you continue to use it?

MR. MILLER: When he returns it to me.

You are worried about my running a tape and giving him a tape of my program?

MR. McCLOSKEY: Right. But the difficulty is that normally when you sell a computer program to someone, he has to have an archival copy of it or something. If he keeps a

copy and then passes that on, and the one you lend it to lends it to someone else --

MR. MILLER: I understand that.

But suppose I buy a program and I lend it physically for use in my friend's computer?

MR. McCLOSKEY: I think that probably would have to be covered by the contract of sale, what rights you would have to pass it on and still be able to use it yourself.

MR. MILLER: But you are not asking copyright protection?

MR. McCLOSKEY: The individual, one copyrighted program, what we are asking for is the integrity of that, there not be copies made from that except to the authorized user, because you have to make a copy of it because we consider it a copy ~~and~~ when it is residing in the core memory of the computer.

MR. MILLER: I am asking you again, if I buy a program and lend it to a friend to use in his or her computer, you are not saying that there should be an infringement when the second, the lendee, the borrower, my friend uses it in his or her computer?

MR. McCLOSKEY: No, not necessarily. I think it is

the kind of thing you would protect by contract. But if you buy and have the right to do that, there is no problem.

MR. MILLER: Would you be offended by a provision in the statute that says you could not protect against that by contract? If I buy a book --

MR. McCLOSKEY: Yes, I certainly would.

MR. MILLER: If I buy a book, I can lend it to a friend, and he or she can read it and pass it on to a third friend. Why shouldn't the original purchaser of that program have the same right with regard to that program?

MR. LACY: Do I understand the distinction that if you are a school and buy a copy of an educational film and with the purchase of that copy require, either explicitly or by understanding, a license to perform the film by exhibiting it to people in the classroom, you are perfectly at liberty to lend it to your friend who is the superintendent of another school, and a friend who owns a TV station, but you are not authorized to authorize that friend to perform the work? Is that the distinction which you are aiming at?

MR. McCLOSKEY: He can read it. You can give it to your friend to read, but not to perform it.

MR. MILLER: In other words, you would like an analogy

to the motion picture film --

MR. McCLOSKEY: In that instance, yes.

MR. MILLER: -- rather than to the book?

MR. LACY: Or to the play?

MR. McCLOSKEY: Or to the play.

MR. LACY: A copy of a play by Samuel French and pay \$25 for the right of performing it in the school, you could lend the script, and anybody could read it who wants.

MR. MILLER: Is there any inherent reason why we should analogize it to the motion picture film rather than to the book?

MR. McCLOSKEY: I would think so because the value of the program is in performance.

MR. MILLER: The value of the book is in the reading.

MR. McCLOSKEY: But the reading is not the same as the performance of the play.

MR. MILLER: Well, that is almost autological. I will accept it, but what does it say? I mean if I buy a copy of a book, and I spend the rest of my life lending it to every person I can find, I can destroy a significant portion of the readership of that book, yet society tolerates that. Indeed, that is why we have libraries.

MR. McCLOSKEY: Well, we have no objection to your letting anybody read it, but to perform it, yes.

MR. CARY: The question is, though, can a person read a program?

MR. McCLOSKEY: There are many programs. You can read it, but it depends on the media that it is in.

There is machine readable and human readable.

MR. CARY: Well, I suppose you could read it from a deck of cards, for example, but in reading it off a tape you would have to have --

MR. McCLOSKEY: Computer listing. You would go through the computer and it would print out for you what it says in human readable terms.

MR. CARY: Okay.

MR. LEVINE: Getting back to Judge Fuld's question, as a practical matter when I sell you a play and you perform that play, I can recognize from that performance that it is my play that is being performed.

Can you recognize from the output of a computer the fact that your computer program is being operated in that machine?

MR. McCLOSKEY: I would say it would be somewhat

— difficult to recognize it if it was strictly the output. You could recognize it if you had a printout of the output plus the computer program that controlled the output.

MR. LEVINE: It is not likely that one would print out.

MR. McCLOSKEY: Well, there are other ways of knowing that. For example, you know, there are programs that require a very substantial investment of time, money, and the community is fairly open. It is apparent that somebody now has the capability that he didn't have with no apparent means of having achieved it because he did not have the programming staff or he didn't -- there are other clues that one could use to make those assumptions.

MR. MILLER: The analogy to the performance is not perfect because at least under existing law if I get a license to do a play, or if I don't get a license to do a play, I can perform it privately. The statute only proscribes those performances that are in public. Indeed in the case of 1-C and 1-E only those performances that not only are in public but are for profit, so at least even under existing legislation the performance right is not comprehensive.

MR. McCLOSKEY: I would agree that it is not perfect,

but I think the performance in the computer --

MR. MILLER: Is a public performance?

MR. McCLOSKEY: We will define that the computer is public, and I think if we do that --

MR. MILLER: We naturally choose those analogies that work for us.

MR. LACY: One might also suggest that the law has accommodated its definition of a performance right to the particular characteristics --

MR. McCLOSKEY: Yes.

MR. LACY: -- providing one for music, different for literature, and different -- or originally different for literature -- and different for music and drama, and there would be no necessary reason that one would not adapt that particular definition to performance that would be appropriate to the profitable exploitation of the program.

MR. MILLER: You used a word that made more sense.

MR. LEVINE: Ms. Karpatkin.

MS. KARPATKIN: When you have a store of computer programs which you offer for sale -- I have seen some of your booklets which contain quite a large number of programs which a buyer can select, and the buyer selects a program that was

appropriate to his needs, what steps would the buyer take before the program is usable for an end product? Doesn't the buyer have to make certain adaptations of the program to its data bank?

MR. McCLOSKEY: Well, the programs in that store would range from simple applications to complex. I suppose there would be some that he could use directly, and some depending upon the peculiarities of his particular application are not quite the same but could be modified to be used with it. So I would say it runs the range of no modifications required to some.

I think if there were too substantial modifications then there would be a question of whether you should write the program with that application or optimizing it for that application rather than bastardizing a program to some extent.

MS. KARPATKIN: Let's assume you would fall short of that and some adaptation is necessary, how do you see the status then of your program? Is that a new program-the adaptation, and would that receive a new copyright?

MR. McCLOSKEY: I think I would have to do a little study on that one.

I think it currently happens in the industry, and

when it does happen the way it is treated as the program itself, that which you gave is the copyrighted portion, and the add-on is his to do with as his right. You have no right to what he has done.

And, on the other hand, I don't think he can sell what he has done that incorporates all of which you have done, plus something else, without your permission. So I don't know if I have helped you on that, but I think it is a problem area. But I think we don't preclude his making whatever applications

are necessary. But we don't assume any copyright on what he has done, but maintain copyright or developer's copyright that he developed originally.

JUDGE FULD: You may continue, Mr. McCloskey.

MR. McCLOSKEY: Well, we have talked about protecting the use, the equivalent of a performance right. We feel that is extremely significant. We feel this can be easily accomplished by providing that the inputting of a program into a computer constitutes copying which requires authorization by the proprietor. Thus, copyright protection should include the exclusive right to make copies by recording within a computer. There would be no objection to the right extending further to the use of a program to operate a computer in a manner similar

to the performance right in the musical or dramatic work.

From these comments you can see that the proper definition of what constitutes "copying" is at the heart of our proposals. There has been considerable debate as to whether certain activities carried on within computer systems constitute copying under present copyright law. We propose that the law be clarified to include activities appropriate to providing effective protection for computer programs. Thus, we propose an amendment to Section 106, to wit:

"In the case of data base and computer program works, to read into, to store or reproduce for storage the work in automatic systems capable of storing, processing, retrieving, or transferring information, or in any similar device, machine or process."

Thus, copying a computer program should include:

Those activities considered to be the copying of a literary work.

Recording onto machine-readable media as by key punching cards.

Duplicating machine-readable media such as punched cards or magnetic tapes.

Inputting a program into a computer from human or machine-readable media.

Inputting a program into computer memory for execution.

JUDGE FULD: That brings up the question I asked before in a more clear fashion.

How can you police or supervise the mere input of a program? How can that be a violation? How can you discover the mere input into another computer?

MR. McCLOSKEY: Well, there are ways that it can be done.

A computer programmer or machine operators know whether or not what they put into the machine, the printouts --

JUDGE FULD: How can the copyright owner find this out?

MR. McCLOSKEY: It is not easy.

JUDGE FULD: Is it possible?

MR. McCLOSKEY: It is capable of verification subsequently, but only when it is unveiled.

You could successfully use it without the knowledge of the proprietor.

JUDGE FULD: You don't need protection until it is

used, do you?

MR. McCLOSKEY: Well, that is what we are trying to protect primarily is the use of it, right.

JUDGE FULD: So this would not be enforceable from the mere inputting, or would it?

MR. McCLOSKEY: Well, we would want it to be enforceable, but we may not be able to know every time that it is being abused, but --

JUDGE FULD: Does it serve any purpose by just having it in?

MR. McCLOSKEY: Oh, yes, because if you didn't -- getting back to the professor's point, he would be able to lend it to whomever you wanted and have that performance right.

JUDGE FULD: Well, then it is used?

MR. McCLOSKEY: Well, the inputting isn't the using of it.

JUDGE FULD: The inputting is the using of the copyright?

MR. McCLOSKEY: Right, yes.

JUDGE FULD: But you are saying a violation occurs when it is put into another machine.

MR. McCLOSKEY: We have that as a right that is able

to be given by the copyright owner to someone that he sells it to, yes.

We want to be sure that he has that right, but we don't want that right to extend further than the person that it was sold to or the company or the application.

MR. NIMMER: But doesn't this become significant if, even though you don't know about it until the printout, the printout may not be an infringement in itself because of fair use or some minimal kind of use. But if by the printout you are alerted to the fact that the program may be fed into the thing, and then you go back to the infringement by virtue of the feeding in.

MR. McCLOSKEY: Yes, that is exactly it.

MR. MILLER: Doesn't that block the ability to make a fair use of the program if you prevent the input in the first place?

MR. McCLOSKEY: I don't think it is fair use to input it. It may be a fair use to read it, to wit, you may want to excerpt some small portion in some fashion. But to use it should not and is not a fair use.

MR. MILLER: Well, isn't that an important point?

MR. McCLOSKEY: That is a very important point.

MR. MILLER: You are saying there shall be no fair use of the computer program other than reading a tape through human eyes?

MR. McCLOSKEY: Yes.

MR. NIMMER: That does not fairly follow. It depends on what you are inputting. If you are ⁱⁿ⁻putting a higher program

MR. MILLER: No. He said they ought to have the right to prevent input.

MR. NIMMER: But input of what? Input of a higher program, not input of some aspect of the program which might be a fair use.

MR. MILLER: A piece of the program. But suppose I want to ^{put} a program in, to do a research or fair use, or what would be called a fair use of a book. Suppose I want to put the program in to do product testing on the program.

You are saying I can't do it.

MR. SMOOT: Not without a license.

MR. MILLER: Not without a license.

In other words, --

MR. McCLOSKEY: The program is done by the developer of the program. The one who comes into its use subsequently would normally have a fair use of product testing it, I think

the doctrine of fair use probably does not apply as readily to computer programs as it does to other --

MR. MILLER: Well, that is what we should think about.

I take it that if a journal develops or the industry does program reviews, the way magazines and newspapers do book reviews, and the expert for the publication whether it is your own organization, or ACM wants to do a review of the quality of programs, it can't do it.

MR. SMOOT: Without a license.

MR. MILLER: Because it would have to manipulate the program in the machine, and you are saying that input is an infringement.

MR. McCLOSKEY: I think we would have to take a hard look at that. It currently does not exist as evaluative means.

JUDGE FULD: There is no device that would prevent the inputting of the copyrighted program into a new machine?

MR. McCLOSKEY: Right.

JUDGE FULD: So the machine would remain dormant. You would never be able to do it except the one who put the copyrighted program into the machine.

MR. SMOOT: There is no device that automatically would preclude you from reading a computer program into another

computer.

JUDGE FULD: You can't conceive of such a device?

MR. SMOOT: You could provide physical locks on the physical media.

MR. McCLOSKEY: Or you can trip the data in some fashion where there would be only one computer that has the decryption code for that particular program. There can be things of that type that could be done, but that is not a practical every-day application.

MR. SMOOT: I think back to your original question, I think the experience to date in the industry has been that in general customers honor the commitments they make in contracts not to recopy or relend copies of the program, so there will always be a certain problem with deliberate and intentional attempts to do that. By and large you would provide a clear statement of the boundary to the user of what he could or could not do. That is the objective procedure.

MR. CARY: Excuse me, Mr. McCloskey.

Could you give us a brief statement of what physical acts are required in order to input a program into a computer? Just what exactly comes in layman's language?

MR. McCLOSKEY: Okay. Well, initially the program

is written by a programmer, normally with a pencil and paper. He writes down certain steps to be taken. There are different languages that he can write those steps down in.

The earliest programmers wrote them in what was called machine language, and that was just a series of ones and zeroes that they would write. And then higher languages developed. First, a symbolic language, which was an instruction that might say, "C L A," which means, "Clear and Add." And then subsequently higher languages developed from that which said, all he would write down would be "Add." He might add Register A to Register B and store it some place. And more and more it got into conversational type statements. Those statements would be keypunched normally or in some form put into a media, and then it would be read into a computer.

A computer would have a compiler program which would take those steps and translate them into the machine language, and you would come out with an object program. That object program would be just the bit configurations for the one, zeroes and a long list of steps, and that would be on a magnetic tape or on a disk pack or on some other media which would then be used in a routine fashion by the computer.

MR. CARY: In other words, if you took that object

program and put it into another computer, this is what you would refer to when you call it inputting?

MR. McCLOSKEY: Yes.

MR. CARY: Would that, in effect, mean making a copy of your program, that is, a second computer?

MR. McCLOSKEY: We say, in fact, when it is on the computer tape and it is subsequently read into the computer memory, that actually the reading it in and it being stored in the memory of the computer should be considered a copy as well. But that is a fair use and would be intended by and would be given as a right, a performance right, to the holder of the program.

MR. CARY: Once it is in there legally then the other uses would be permissible?

MR. McCLOSKEY: Yes. But once it is in there, you see, it is also very easy to make extra copies, as many as you want. Just tell the computer to input its contents on magnetic tape, and it may have one through ten, or fifty, or however many copies you want, and if you want to take that and give it to someone else, that is what we want to prevent. We want to make sure that that performance right only goes with the actual program that is sold.

MR. CARY: Well, then getting back to the original question which Judge Fuld asked, one way in which this could be found out is you probably have to get a computer programmer who actually inputted this program to testify that, yes, he did.

Is there any other way short of something like that miracle that you could tell us?

MR. McCLOSKEY: Well, I think for him to be able to input it, he would also have to have a copy.

In other words, he would have had to have the physical evidence. It is ephemeral once it is in the computer because it can be wiped out, but on the magnetic tape it would be there, and would be permanently stored there unless it was written over. And if you had that tape itself and it was an unauthorized copy, that would be enough. See, it is an unauthorized use of it and he should not have that. The only authorized copy of that is the one that was sold with the machine. If he doesn't have that one, then he has an unauthorized one.

MR. KEPLINGER: In the matter of policing this copying, wouldn't the console log, the log that is a record of operations of this system, indicate that contents of memory

were copied at a certain time, or that Tape A was copied to Tape B?

MR. McCLOSKEY: Certainly if you had that type of control on a console log and you were that orderly and that was the operations procedure, you might have some physical evidence that that happened. I don't know that all installations do that, but some certainly do.

MR. PERLE: Going all the way back in history, weren't the first programs permanent for limited purposes, for limited use? Weren't they wired and hooked up so that it was a physical object that you could see, touch, feel and look at?

MR. McCLOSKEY: Yes, sir. Originally, well, they could have been written initially. Then they were plugged in a plug-board. You actually took a wire from this point and a wire to this point, a wire from here to a wire to there.

MR. PERLE: Do you believe that that type of program should have copyright protection, the old one?

MR. SMOOT: You mean the plug-board itself?

MR. McCLOSKEY: The initial steps?

MR. PERLE: I am talking about that which is actually used.

MR. McCLOSKEY: I would say yes.

MR. PERLE: Copyrighted?

MR. McCLOSKEY: Yes.

MR. PERLE:

As I

read what you are saying, you want a means of protecting the labors of the people who produced the program, and you want them to get a return on their investment?

MR. McCLOSKEY: Right.

MR. PERLE: In one way or another.

I wonder why you think that copyright is the appropriate means of doing it.

MR. McCLOSKEY: Well, I think the major reason is that it does bear a very close resemblance to, for instance, a musical work.

MR. PERLE: Well, if you go back to the historic basis of it, why would it not be patent protection? Is patent protection only that which is novel or original to be protected?

MR. McCLOSKEY: Right.

MR. HERSEY: Mr. McCloskey, since there seems to be so much hauling and shoving, it is like shoe-horn work, on the protection of programs into the copyright law, would it not be preferable from your point of view to start from scratch, that is, have legislation written which would specifically

protect things that you feel should be protected, or programs which would also specifically guarantee the needs of users and the public?

MR. McCLOSKEY: Well, in answer to that I would say I think the interpretation of the industry, and I think of the Register of Copyrights, and the legislative history of the rules and consideration under the law, is that it is currently copyrightable. But that does not preclude the desire for having something perhaps even simpler and somewhat more specific and addressed specifically to that need. There are a number of companies who have already made substantial investments in protecting programs with copyright, so you would ^{not} want to "throw out the baby with the bathwater" kind of thing.

We are not precluding the desirability for a separate initiative that would sharpen the distinctions and allow more precision.

MR. HERSEY: What would be best from your point of view?

MR. McCLOSKEY: Well, I think that probably it would be the combination that you handle basically all three, patent protection, copyright protection, and then something that would be unique.

MR. PERLE: That is something hard to do.

MR. McCLOSKEY: Well, it is hard to do, but, you know, there is no reason to preclude it.

MR. PERLE: There are a lot of reasons for doing it.

I think either you are going to have to say you want the standards of copyright protection, which is copying, copying and performance. That is all a copyright can do for you, protect against it.

If I sit down and write **AN** ODE TO A GRECIAN URN and I have never seen the original, there is no infringement. I have not copied.

You would like to prevent that?

MR. McCLOSKEY: I would not like to prevent it.

MR. PERLE: I honestly do not think you want patent protection, because patent protection would mean most of your programs would not be patent protectable.

MR. McCLOSKEY: I think, though, whether or not there would be patent protection would be the individual judgment by a number of people depending on their view. I have no particular view on that subject. I don't think there is a uniform view in the industry that they would not want to have patent protection, but the patent protection would cover that ODE TO

A GRECIAN URN situation, for the first one, who did it. If it was indeed novel and unobvious; whereas, copyright protection would not. So that is why you may want to have both.

MR. PERLE: Well, in many ways they preclude each other. But why would you not want a totally separate law which says, "We are dealing here with something that is a different animal"?

MR. McCLOSKEY: Well, I wouldn't want a totally separate law to rule out the copyright protection because a substantial investment has been made to date on the assumption that they were covered under this law, so I would not pre-empt the one.

MR. PERLE: No. That investment should not influence this Commission or the Congress, because that was done under rule of doubt. No one has thus far determined that a program is copyrightable. The only thing that has happened is that this office right here has said we will accept it. We don't know about what is going on. So that anybody who wants to shoot crap on that crap table has made an investment which may or may not be a good investment. That should not alter what the ultimate protection to be accorded to this very, very important mechanism is. And I for one, I don't care about

the investment that has been made.

I want to know ultimately whether we should try to put programs as opposed to other things into a copyright mold, inject it into the copyright law, should it be there or should it be somewhere else.

MR. McCLOSKEY: I personally believe that it should be there.

MR. PERLE: Obviously some people are having some troubles with that because by its very nature it is something which is not designed to stand alone. It must be used in conjunction with a whole host of other things, and that is the big problem with it, one of the big problems that no program has any utility value or ability to be used. You are going right back to the musical instruments' problem that the copyright law had and still has. How do you protect a phonograph record? You protect it with a different law, the record itself. And maybe that is what you ought to be looking at and maybe that is what we ought to be looking at.

I am not saying that any of us has reached a conclusion. We are here to find out. But I simply cannot accept the broad statement that we ought to have this in the copyright law because the copyright law is there, and because this

office has been accepting it.

MR. McCLOSKEY: Well, it is more, because it isn't, in fact, a literary expression. It doesn't meet so many of the tests for the copyright.

MS. KARPATKIN: Do you see problems of enforcement and policing? If somebody infringes a book copyright by publishing another book, it is a rather public act. What infringes a copyright for a system of doing a payroll? What system would you use for protecting your copyrights? How would you know about that?

MR. McCLOSKEY: Well, there would be no systematic means of doing that. I think it would have to somehow come to the attention of the holder of the copyright that somebody is doing it, and they would have to proceed in some fashion to make those determinations.

I don't see that it is insurmountable. One of the natures of the industry is that people do move from company to company. In this particular post-Watergate era I think more attention would be paid to the legitimacy of activities of companies, and I think companies try to do this. I don't think we have wholesale attempts to subvert the intention or the rights of the owner of a program today, but I think that we

— should have a solid base to oppose this.

MS. KARPATKIN: What do we have today? What system is protecting your interests at this moment? What is working now that keeps you from having --

MR. McCLOSKEY: Because of the basic morality of the people. It is an unfair thing to do. And no businesses are built on that kind of premise. That does not mean that there are not people who try to do it and steal it themselves, but basically the people who buy it would be thinking they are buying something because it is a good product. So it is not the normal course of business.

MR. LEVINE: The theory behind the constitutional provision of the copyright law is that by providing incentives to authors to create works. ^To be created is the creation of new programs. ~~Has~~ the creation of new programs been inhibited because there is not a performance right present in the copyright law for computer programs?

MR. McCLOSKEY: I think probably so. I think particularly in terms of individuals, because after all individuals can write computer programs. There is a great market out there for computer programs, but with the uncertainties that exist connected to them I think it has been an inhibiting factor.

I think you can see a greater flourishing, a greater availability of programs, a greater sharing of programs, a greater opportunity for return on the investment of either the sole developer, or company, or company who is a user who developed an application for his own needs to be able to share that by in turn marketing it to someone else.

MR. PERLE: Mr. McCloskey, there is a bill that has been pending in the Congress for what I consider a long time called the Federal Law of Unfair Competition.

Has your organization ever presented its views with respect to that bill?

MR. McCLOSKEY: We have not, no.

MR. PERLE: You have not.

MR. LACY: Mr. Chairman, following Mr. Levine's comment I would take it that the rationale behind the copyright act is not only to provide incentives for creation, but also for the dissemination of knowledge, and I have the impression that in point of fact not nearly as many programs are offered for sale to anyone who wishes to buy them now as are leased on rather restrictive conditions as to trade secrecy and availability. That one is relied on in narrowing the access to the program.

I am wondering if copyright protection of this sort is proposed, or more clearly defined copyright protection is proposed, to provide an effective incentive to the more open and broad dissemination of programs through their publication.

Would the mode of dissemination of programs change the mode of author bias?

MR. McCLOSKEY: I can't give you the solid evidence, but I can give you my judgment that it would. Those that have relied on trade secrets and strict contractual coverage could look to another device with more assurance, and it would be more amenable to greater publication and greater, therefore, dissemination of the program.

MR. MILLER: If I could just pick up on that.

Mr. Lacy has just pointed to the policy objective that motivated several of my earlier questions.

If the trade-off in giving the programmer a copyright is to increase access to that program by those who might use it, or derivatives or adaptations of it -- you used the word "dissemination" -- access and dissemination might be thought of as two sides of the same coin.

But if at the same time you are successful with the notion that I cannot lend my program the way I can lend a book,

and I cannot input the program to achieve a fair use of that program, then I really wonder whether it is fair for you to say that extending copyright protection will increase access and dissemination of the ideas invented in that program.

MR. McCLOSKEY: Well, I would be willing to go back and ask our committee to study fair use. What we are concerned about in the fair use is utilization of the program in a competitive way without remuneration to the author.

MR. MILLER: The book publishing industry feels the same way about reprography, but I don't ^{think} they would push the notion that books cannot be put on library shelves because someone might duplicate them.

MR. SMOOT: You are not talking about equivalent things.

MR. MILLER: Maybe yes; maybe no.

MR. SMOOT: If you take a listing of the program, then that is an equivalent of a book.

MR. McCLOSKEY: Yes. That's what could be done. There could be a compendium of programs that are available with a complete listing for anybody to look at.

MR. MILLER: To look at the programs or to look at the listing of programs?

MR. McCLOSKEY: Well, the listing is the more important thing. In looking at the program you can't --

MR. MILLER: You are talking about an alpha-numerical presentation of the program?

MR. McCLOSKEY: I am talking about human readable form.

MR. MILLER: Yes.

MR. McCLOSKEY: Most of the programs are not sold in human readable form. They are sold in machine readable forms.

MR. MILLER: Yes.

MS. WILCOX: Is it correct that most of the programs come with some documentation, that is, readable in human terms?

MR. McCLOSKEY: Yes. That would normally be the case, but not necessarily.

MS. WILCOX: Because I get lost when you say a listing of the programs. That would be the same, again if we go back to the book, it is the analogy of the book. It is a bibliography, a listing of titles.

MR. McCLOSKEY: Yes, but it is a listing in computer terminology which is more of a work of art. What it means is you put the program into a computer, and

— you have a printout which is a listing of the computer steps. I don't mean just a synopsis, but it is the actual listing of every individual step. But if we can just avoid the use of that term, but that is, you know, a one-paragraph description of a computer program. It may not be sufficient information for someone to know whether that application of that program is applicable to his particular installation. He may need more information.

By having the capability of copyright protection, it is quite possible that he will have a readier access to that kind of information to make decisions whether or not, for instance, a major decision is whether or not we should reinvent the wheel. Should we create a program ourselves when one exists in the public domain. I mean not in the public domain, but in the copyrighted domain, if you will.

MR. MILLER: So you could foresee a library of listings?

MR. McCLOSKEY: Yes.

MS. KARPATKIN: You have made it clear how the programming business would benefit from copyright.

— Could you discuss how the public interest would be served?

MR. McCLOSKEY: Well, I think, first there would be a more effective utilization of programs.

I think there would be easier disseminations. I think the cost to the end user would be considerably cheaper if he had available to him all of the options that were available, he could make judgments about whether or not to reinvent the wheel in this specific case or not.

I think you would find a number of small programming houses springing up, being a more vital factor in the industry, because two or three programmers could have an idea about an application, could develop it, and could market it effectively, and have some assurance that they are going to be protected.

So you have greater utilization of existing programs which should bring the free-market place more competitive pricing and lower cost to the end users.

And you also have --

MS. KARPATKIN: Do you have any studies which would show over the long term the comparative costs of leasing or buying a copyrighted program and adapting it to a business's own use rather than writing only on its own?

MR. McCLOSKEY: I have no studies, no.

MR. SMOOT: I don't think any of them do.

You see, over the long term, you know, we are talking essentially of 25 years since the beginning of computer applications, and the marketing of computer software has really been about-- it's only about ten years now.

MR. MILLER: Are there any studies showing the degree, if any, of concentration in the program field that is suggestive of whether extending copyright protection would increase or decrease that concentration?

MR. McCLOSKEY: I don't believe there are any studies that show that, but I think there are certain trends that are obvious today in terms of software houses, and basically I think you will find that in almost every middle-size and perhaps small towns and cities there are small shops that are specializing in software development. So you see more and more of this kind of thing happening.

MR. MILLER: Are those markets local and regional, and if you recognize copyright protection, would that tend to create a national market and perhaps increase concentration?

Or is this just "blue sky" ?

MR. McCLOSKEY: No. I think it would provide a national market for anybody who had a good product.

MS. KARPATKIN: These local houses that have

programming or software, do they do it on a contract for a particular purpose, or do they develop a store of these things and then send out a listing and attempt to market them?

MR. McCLOSKEY: I think most of them are available to handle special contracts, but their orientation could shift dramatically if they had a market to go to. In other words, instead of writing for one particular customer, if they could negotiate a contract that included the right for them to sell that application to make the one who paid for the original development share in whatever revenues they get, there is just a broader dissemination and on a greater base.

MS. KARPATKIN: How many companies today have a store of programs they market to businesses generally?

MR. McCLOSKEY: I really don't know.

I would guess they are in excess of 50; how many, I don't know.

MS. KARPATKIN : Are there any companies who have a dominant interest in the market? Is the market controlled, say, by the hardware producers?

For example, UNIVAC has a whole package of stuff that it supplied to the market.

MR. McCLOSKEY: I think the systems control programs,

for the most part, are so uniquely tied to the computer that they are designed to work with, they certainly are the normal product of the manufacturer and, in fact, they are usually provided free with the system, I believe. But that varies.

I think applications programs are not unique to the systems manufacturer, although they also provide -- I am not sure that all of them sell them at the current time.

There has been a dramatic shift in that area where initially all of them were provided, but the way the market developed or the way the industry developed, applications were made available free by the systems manufacturer. That has changed, which allows really more competition to come in, because the individual software house can now sell a product, where before he may have been competing against a free program that would have been distributed. There would be more emphasis on programs that are truly efficient. This is where we come up with distinctions between programmers.

There are degrees of elegance, if you will, within a programming community. You can design programs that operate more efficiently than somebody else's, and if it does operate more efficiently that means that he has more computer time available to him. And once the computer time is utilized

fully, he has been moved to a computer that would cost more money.

So there are great benefits to the user to get the most efficient program that he can to cut down the amount of time that is utilized by the computer that he happens to have to insure that he can continue to use his computer and does not have to go to the next highest because of increasing computer demand.

JUDGE FULD: We have for the moment run out of questions.

Continue.

MR. LACY: I haven't.

I don't want to interrupt the completion of Mr. McCloskey's testimony, but I do have a couple of questions to ask him before he leaves.

All right. One can perceive that right that one might get by the legal remedy in the case of a firm having become the possessor of a copy of the program without a license making a payment to the provider, just plainly exploits that particular program. But I think that one of the things that has troubled a good many people here, including me, is that

obviously any program is made up of a number of component units. Well, just to oversimplify, obviously one characteristic would be computer applications to be able to add and subtract quantities to a degree of things, whether you are running an inventory control system, or an accounts receivable system, or deposits or withdrawals at a bank, or whatever.

Obviously I assume there is a best way to do that particular step.

Now are we inviting a lot of contentious litigation of program developers who develop a program, let's say, for handling bank deposits which uses components of a program over here that is doing accounts receivable for a department store, ^{is that} an infringement, although it is a different program, it has picked up a system that we used for just this fairly simple operation, making additions to and subtractions from a packet.

What is your feeling on that particular problem?

MR. McCLOSKEY: Well, I think that there may come an accepted way of doing some particular, some routine at least, and it is kind of judged to be by programmers universally the most elegant solution so that it gets pretty much hard and fast. Again, that kind of thing is possible. But

I don't think it is possible for the full application itself. I think that is what you would be looking at.

MR. LACY: I think there might be some agreement on the full application, maybe not exactly at least as to the equities, not necessarily to the degree. But I think the question that bothers a lot of us is when you take the total application, are you limiting the possibility of other people of reassembling its component parts to make a quite different program?

MR. McCLOSKEY: I think I see the problem.

I see there is a judgment level involved, and you obviously can get into suits. What you are concerned about is if there is some trivial type of adaptation of some copyrighted work that it may itself have been lifted from some place earlier. So I think there would have to be some degree of judgment and some substantial use requirement rather than --

MR. LACY: You submitted some draft language -- I assume you are familiar with the draft language that the Information Industry Association developed dealing with the good many of the same points, or are you?

MR. McCLOSKEY: I am not specifically aware of that. I know our committee has been made aware of that.

MR. LACY: I wondered whether there are important differences between the Information Industry Association's language which was submitted to the Subcommittee of the Judiciary Committee last year.

MR. McCLOSKEY: I think they are substantially in agreement.

MR. SMOOT: I think they addressed some additional items that we don't address, but I think in terms of computer programs I think there is --

MR. LACY: Well, they really don't deal with computer programs.

This is a little repetitive to something you said before, but if one assumed that this Commission recommended and Congress adopted the language you propose, how would you see -- what differences, what significant differences in the whole way of doing business would you see actually happening in real life? What would be different from what it is today?

MR. McCLOSKEY: Well, I would think a major one would be those companies ^{which} have relied on trade secrets as their method of protecting their programs, would have to bring them out into the open.

I think there would be freer availability. I think

there would be quicker knowledge of availability of new applications. And I think there would be a period of dynamic growth in the software industry itself.

MR. LACY: I have no further questions.

JUDGE FULD: Do you want to continue, or have we destroyed the continuity of what you were saying?

MR. McCLOSKEY: I think many of the questions have brought up things that I intended to say, so I don't want to be too repetitive by repeating that.

JUDGE FULD: That's all right. Don't hesitate.

MR. McCLOSKEY: One thing we did not cover is the question of notice of copyright, so I will talk briefly about that.

We feel that the copyright notice should be affixed to the software product by including a visual label on the tape reel, disc pack or other physical media, that indicates things that are covered.

We feel additional study is required to ascertain the administrative and cost effectiveness of including the actual notice in the program code itself so that it would appear on a listing of the contents of the machine-readable media, and thereby always accompany that program in or out of

a computer.

We also addressed briefly the question of deposit of copies for registration.

We don't feel that it should be necessary to do that unless the copies are to be retained in the permanent collection of the Library of Congress. And like motion picture copies of these items are valuable items. If deposit is required, however, it is suggested that copies should be deposited in the form in which they are marketed, whatever that is, where that is convenient. Thus, they would be deposited as tapes, discs, or decks of cards.

In our view, flowcharts and complete documentation of packages

would usually be copyrightable separately. Thus, they would not be deposited necessarily with the machine-readable program unless it is an integrated documentation program package.

I will try to address again your question of impact.

First, I think, copyright would become a much more useful mechanism for protecting most programs against the major risks faced by their proprietors. This risk is copying for use. We believe that reliance on restrictive licensing

arrangements and trade secrets would be reduced.

On the other hand, we believe that common law copyright, trade secrets and contractual licenses have a proper role to play and do not recommend that they necessarily be eliminated.

But we think that the changes could result in some of the following things:

As far as the proprietor is concerned where he happens to be a user, it will encourage him to make the programs he has written available to other users, thereby distributing the cost of his development and perhaps providing an additional revenue opportunity.

Where he is a software house, it should encourage additional investment and development.

Where he is a systems manufacturer, it should encourage him to divert more capital into programming.

As far as users specifically he would have more program offerings to choose from.

He would find better programs available because the developer will feel that his investment is protected.

That he would have more motivation to market his own programs, thereby extending the benefit thereof to other

users.

He should find programs to be of a lower price since the developer can recover his cost across a broader base.

He should find more flexible expenditure control since he will be able to buy in prosperous years and avoid expenditure in lean years.

He will have less protection and security requirements and thereby reduce his cost of doing business.

And I think that basically covers the prepared remarks that I have.

MR. NIMMER:

I did have a question which is really a legal question; but your point on pre-emption having to do with Section 301 and suggested changes,

I don't really understand. Why are you concerned about the application of the copyright notice? Pre-emption does not arise by virtue of claiming copyright with a notice. It is either in an area in which you could claim copyright, in which case it is pre-empted, or it is not. It does not really make any difference whether an individual copyrights as I see it.

Also, I am not clear why you feel you need additional language about misappropriation where misappropriation is already mentioned. It is not equivalent to exclusive rights,

— And trade secrets. That's covered by existing language in the breach of trust, maybe conversion.

In other words, all that pre-emption language I would like to hear a little about it, if you want to speak about it.

MR. McCLOSKEY: I think there are those that are pre-emptory. I am not sure that I have the specific facts. There is a point that I am aware of that some have not registered although they have marked copyright, and have relied on trade secret protection, and they don't want the fact of having marked it with copyright ^{to} eliminate their ability to utilize trade secret protection.

MR. NIMMER: My point is, if trade secrets are pre-empted, then you don't avoid that by putting or not putting the notice on. If, on the other hand, the trade secrets are not pre-empted, then putting the notice on it also does not affect pre-emption.

MR. LACY: Isn't the inclusion of the notice without a publication a false claim of copyright?

MR. NIMMER: I would regard that as a surplus issue.

— MR. LACY: I mean assuming that it is not a musical score or something, it is copyrightable as a publication.

MR. NIMMER: I think it would be a false statement if you are presenting it to the public, but then you have to imagine presenting it to the public but not publishing it.

MR. PERLE: The whole concept of publication as we know it now means that if you have a statutory copyright there can't be a trade secret because you haven't published it. They just can't co-exist.

MR. FRASE: Doesn't the deposit of copies have a different role in this situation ^{than} in ordinary publications as sold in large numbers, you can buy them in bookstores or you can go to a public library? How do you serve the publications functions by making the idea available so other people can improve on them and adapt them for other purposes unless you have some central place where these programs are available for inspection?

MR. McCLOSKEY: Well, I think that that may grow out of library or stores that created this specialized program development. I don't think it is usually intended that the Library of Congress be that place.

MR. FRASE: I know it has not been its traditional form, but I think this might be quite a different situation.

MR. McCLOSKEY: Well, I think that would sort of be

a nightmare if the Library of Congress had to have all the manufacturers' various computers to be able to read the machine-readable information.

separately copyright-
able is the way we understand it.

And we are also looking to be able to copyright the machine-readable form.

MR. FRASE: But would you propose then the soliciting of this human-readable printout of the program be deposited?

MR. McCLOSKEY: If you deposit, yes. If you deposit, as I understand it, you would have to have in your proposed law one copy in human readable and two copies in the other media.

MR. FRASE: So there would be in the Copyright Office

MR. McCLOSKEY: One copy.

MR. FRASE: -- one copy in the human readable form?

MR. McCLOSKEY: Yes.

MR. LEVINE: Is there really any sense in having a life plus fifty or 28 plus 28 year term of copyright protection for a computer program? Is a computer program exploitable for that length of time, or should the term of protection for computer programs be for a shorter period?

MR. McCLOSKEY: Well, I think historically, because of the rapidly-changing technology, that perhaps it would have been unnecessary in the past. I don't know what it is going to be in the future, and we are really talking about something that we hope will go on for some time, and we may at some point reach the physical limit of new technology that is applicable, so it could have an extraordinarily long life in the future. But I think we were more concerned that there not be any need for special treatment for computers, and just not make a complex subject more complex.

MR. CARY: Mr. Chairman?

JUDGE FULD: Yes.

MR. CARY: In that connection one of the other organizations who is going to testify has indicated that they believe five years is sufficient time for protection.

What is your general view of that?

MR. McCLOSKEY: I would think certainly the useful life should exceed more than five years. There are many programs that are currently being utilized today that have been in operation for five years. I think

it is certainly better than nothing, but I believe if we were trying to protect it for its useful life, I don't

think five years would be a good terminus for its useful life.

MR. CARY: Not even if you had a renewal provision that would give you five-year original term and another five years?

MR. McCLOSKEY: Well, that would be certainly much more acceptable.

MR. CARY: Say, ten years instead of 56 or 75 or whatever it is?

MR. McCLOSKEY: Yes. I don't think we are, you know, locked in hard on that recommendation. I just would like to set up a separate one. I don't think five years is sufficient.

MR. DIX: Mr. Chairman, I am sorry I came late.

This may have been asked.

All through here, all ^{of} you are really testifying today borrowing the language from the other kind of copyright. I am talking about parallels to literary creation and this kind of thing, all of which suggests that it is an individual human being and not a company who develops a program.

And I am not clear to the extent to which this is, in fact, true. But am I not right, and I guess I will have to ask the lawyers on the Commission here as well as you, that an individual programmer could, in fact, then walk in with a

program and copyright it in his own name, or he could assign it to his employer?

MR. McCLOSKEY: Yes.

MR. DIX: That would be the normal trade practice?

MR. McCLOSKEY: Yes.

MR. LEVINE: Under the copyright law now the employer is considered, the employer for hire is considered the author; therefore, there would not be an assignment because the rights would reside ab initio in the employer for hire.

MR. HERSEY: I see. But the term life plus fifty years for authors.

MR. LEVINE: Under the renewal bill there are special provisions for works copyrighted by corporations.

MR. NIMMER: 75 years from publication or a hundred years from completion?

MR. LEVINE: Yes.

JUDGE FULD: Are there any other questions or comments?

MR. LACY: I have one other.

Are you aware of any significant differences in the position you have taken or the recommendations you have made on the matter of independent programmers not connected with computer manufacturers?

MR. McCLOSKEY: I have not, no.

MR. SMOOT: I think we have to say that we have not seen any formal statements, so we could not answer that.

MR. LACY: But you don't perceive any great difference of interest?

MR. McCLOSKEY: I am not aware of any philosophical differences.

MR. SMOOT: I think you might hear that more this afternoon.

JUDGE FULD: Thank you very much, Mr. McCloskey. . . You have been very informative and very instructive.

MR. McCLOSKEY: Thank you.

We will remain available to the Committee at any time to try --

MR. FERLE: Just one more.

Are there, in fact, any individual programmers, individuals who are themselves writing their programs the way the professor would write them?

MR. McCLOSKEY: There certainly are individual programmers who probably are doing that.

I think that what is happening is interesting in that there is developing in the mini-computer field, at least,

a market for home computers, and that as the cost for computers comes further down, that will be more and more of a visible market, and that certainly is in that area.

MR. PERLE: Well, I find it hard to believe that there are very many people who are writing programs unless they are being paid by some corporation to do it.

MR. SMOOT: The fellow who lives across the street from me works as an individual programmer and systems analyst. He does work on contract to --

MR. PERLE: On a contract for a specific purpose?

MR. SMOOT: But he can and has developed things that he uses.

You see, one of the differences that you might see is -- I think what you are saying is now chiefly the business of programming is in this area analogous to a personal service or consulting operation.

If you were able to produce a program which did an effective job and to protect that program, then you would have a product that you could sell, which is an entirely different approach to earning money and selling simply your time.

And people do attempt to do this right now.

MR. PERLE: To do what?

MR. SMOOT: To develop programs. And then they find customers for this program, you see. In other words, they don't always custom build a program for each customer.

JUDGE FULD: Yes.

MS. WILCOX: This may happen in academia where programmers do write programs, it is a very real question of who owns them, because the university has not been seeking that protection to clarify it, would that be true?

MR. SMOOT: Yes.

JUDGE FULD: Again, thank you, Mr. McCloskey and Mr. Smoot.

MR. McCLOSKEY: Thank you.

MR. LEVINE: This concludes this portion of the proceedings.

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AFTERNOON SESSION

JUDGE FULD: We are going to hear this afternoon from the American Federation of Information Processing Societies.

Mr. Nyborg, you are going to introduce the speakers?

MR. NYBORG: Thank you, Judge Fuld, and members of the Commission.

I am going to briefly introduce the American Federation of Information Processing Societies, to which we refer by acronym as AFIPS, and the testimony which AFIPS has arranged today.

My name Philip Nyborg, and I am Director of the AFIPS Washington Office.

Also with us today and seated behind us to the left is Dr. Robert Rector, the Executive Director of AFIPS.

I would like also at the outset to introduce the witnesses invited by the three AFIPS societies participating in today's testimony.

They are Mr. Herbert Bright, invited by the Association for Computing Machinery; Mr. William Moser, invited by the Data Processing Management Association; Mr. Herbert Koller, by the Computer Society for the Institute for Electrical and Electronic

Engineers.

AFIPS itself is a federation of fifteen nonprofit scientific and educational organizations, societies which together broadly represent over 100,000 individuals concerned with computers and their various applications.

AFIPS has no commercial entities as members, and neither AFIPS or any of its constituent societies have a commercial interest in the copyright protection for software.

The basic purposes of AFIPS are the promotion of information exchange amongst professional and technical societies and governmental groups, including amongst the societies nonprofit international groups, and the dissemination of reliable information on information processing to interested groups in the private and governmental sectors as well as to the general public.

AFIPS activities are carried out almost entirely by non-paid volunteers who participate in AFIPS as a professional activity. Typically, our activities are organized around specific committees, which address the various substantive areas in which AFIPS is interested.

The function of AFIPS in arranging this testimony has been to provide the Commission access to technical expertise

within the AFIPS societies. None of the testimony presented here should be construed as the official organizational viewpoint of AFIPS.

AFIPS society members are users of software as both programmers and systems analysts. They are authors of their own software as well as users of other peoples' software.

Our societies have various activities in topics such as software engineering and other aspects of software development.

Our academic constituency has a substantial interest in the development of software, and many members of our constituent societies are managers of data processing installations.

The individuals presenting substantive comments today will speak either as individual experts or will present summaries of the comments of individual experts within their respective organizations.

They do not speak on behalf of their particular societies unless they specifically indicate to the contrary.

In all cases time constraints have made it impossible to conduct a broad survey within the AFIPS societies participating here on the questions to be addressed by the Commission.

Finally, I would point out that the testimony prepared here today has been prepared for presentation, and has been prepared in an extraordinarily brief time period in order to be responsive to the Commission's schedule.

It is our hope that the Commission will be able to give greater consideration to the important issue of software copyright in the time period which would first permit a realistic assessment of the existing practices within and anticipated impact upon the information processing community with regard to software protection; and, secondly, would permit the opportunity to assemble a substantial amount of the existing analysis relating to the issue of software copyright.

Should the Commission decide to so proceed, I believe that the AFIPS Societies could be quite helpful and would be interested in discussing further participation.

Our format for testimony will consist of three brief presentations followed by a period of approximately half an hour during which our panel of witnesses will respond to questions the Commissioners will present.

JUDGE FULD: They would prefer not to be interrupted while they are making their presentations?

MR. NYBORG: I believe that would facilitate things,

Judge Fuld, but we certainly would be amenable to whatever the Commission would like to do.

JUDGE FULD: The first speaker will be Mr. Bright.

MR. BRIGHT: Judge Fuld, may I point out first as I did in the covering correspondence which I think you have that it is clear that not only would it be impossible for me to speak for the enormous spread of interest in ACM, but I happen to be the head and have been for ten years of a firm which has a commercial interest in the protectability of software, so I urge you recognize me as a not disinterested witness, and I assume that you will accept my remarks in good faith, and on that basis I would like to proceed.

I would like to call particular attention to the fact that it seems ^{that} one of the major questions of concern is the relationship of possible changes in copyright protection to other forms of protection that may exist for this software entity; and that for this reason it seems to me that the question of finding profitable and competent decisions particularly from the legal point of view is a very important one, and I would call your attention to a comment that I referred to in my written notes on the work of the Committee on Computer Software Protection of the National Council of

Patent Law Associations. Unfortunately the Committee is not active at this time. There are a substantial series of meeting minutes and related memoranda that I think could be of considerable use to the Commission, and they represent a primary legal based consideration of this question of the members including myself, which you would call computer-oriented people; the others have an interest of some sort. So I would urge you take seriously the work of that group as useful input data.

JUDGE FULD: Is that attached to your report?

MR. BRIGHT: I have attached only the latest membership list that I have available, Judge Fuld.

JUDGE FULD: Do you have the material handy?

MR. BRIGHT: It is attached as part of the submission that AFIPS made, I believe. I believe this is Attachment D to my letter, which is the ACM statement.

I did also attach an additional comment consisting of a response to a question by Commissioner Dan of about a year ago in connection with this WIPO Conference in which I spoke to the question to some extent of the representation of software and what it means.

With regard to the questions that were circulated

by the Commission I have attempted to make some kind of responses, but I am sure that anyone looking at it will recognize that in most cases it simply was not possible for me to give a responsible answer inasmuch as I would not, even if I could after extensive review, attempt to speak for about 32,000 individual members, and 14 corporations and 175 universities. We do have some disparity of viewpoint, so most of the questions unfortunately called for rather specific kinds of answers to which we can, I think in good faith, attempt to speak to the substance; the definition of the terms as commonly understood, and what we as individuals may consider important and meaningful both to the industry and to the public. But I do want to make sure you realize that in many ways it would simply not be useful for me to attempt to respond specifically to questions which, in fact, ~~must~~ be considered in terms of the point of view of the speaker.

I would say by and large the AFIPS Societies include a very broad spectrum of interests. I would say that even in that group ACM may represent the broadest and least sharply focused membership of all. That includes people ranging all the way from purely management-oriented people, ^{to} operations-oriented people, to many of our most distinguished academic

workers, and, in fact, much of the most meaningful work in the most abstract areas of computing has come from people who are active members. So I think it is important to recognize that.

I think this does, however, mean that ACM as a part of AFIPS does represent a reasonable resource as far as the Commission might find itself interested in getting answers to questions, recognizing that in some cases specific information may be available, allowing the appropriate amount of time and contact with the right people. So that I would urge you to make use of this as, in effect, a public information source which the society would be delighted to provide.

I am speaking at this point for the President, with whom I have discussed this testimony, I believe, last night for the sixth time since this invitation was issued. And I can say that the society recognizes the importance of what you gentlemen are trying to do, and is anxious to have you operate with the most meaningful input, so we would like to help.

MR. BRIGHT: I believe that concludes what it would be appropriate for me to volunteer, Phil.

If the Commission or if anyone has a question at this point or at some other time, I would be happy to try to respond.

JUDGE FULD: It might be helpful if we heard the other gentlemen, and perhaps there would be similar questions.

MR. MOSER: My name is William J. Moser, and I am from the Data Processing Management Association. I do have a short disclaimer.

First of all, unlike Mr. Bright my firm is not engaged in any area of software where patentability would be of any interest to me personally. But like Mr. Bright I cannot speak for a non-monolithic organization with any strength of the total number of that organization.

However, perhaps because we are ^a little more naïve, we will try to give you some answers, specifically to your questions based on what we were able to determine or feel is the consensus of the members with whom we were able to discuss the questions, and based on past discussions; but all very informal. We have no formal committee to discuss these things at this time.

With that, your first question asked:

"Should a computer program be copyrightable?"

And this was in part of the question, "or patentable?"

And in view of those two choices only, we have to say yes. If there were another choice, we might not say yes too quickly.

We believe programs should be copyrightable.

JUDGE FULD: By another choice, what do you have in mind?

MR. MOSER: Possibly another type of protection under law.

As far as, "Should it ^{be} patentable?" our feeling at this point is that the law so far seems to have been interpreted ^{that} it could be patentable if it is unique, exceptionally unique.

We don't see any reason to deny that right, at least not now.

This patent area, as we saw this morning and that you all noticed, is so broad that it probably needs a whole other series of hearings.

MR. LEVINE: Let me just at that point ask

What percentage of programs would you estimate are

so unique that they might qualify for patent protection?

MR. MOSER: Very small.

My conversations with people in our membership indicates the law as, of course, interpreted so far we can't be very wrong.

Does that answer your question?

MR. LEVINE: Yes.

MR. MOSER: "Should the type of protection afforded vary according to the nature of the program?"

Again, we don't feel that it should. If a program or software is worthy of protection, one type of protection hopefully would be able to cover all types or natures of programs.

"For what length of time...?"

We don't have strong feelings in this area.

As evidenced in the discussion this morning there is a wide disparity in the time frames here, and the speed at which the technology has advanced in the past may or may not continue in the foreseeable future.

We don't at this time see any reason if it is made to fit into present law that the time period for software should be any different than the time period for other things

covered by the same laws.

MR. LEVINE: It does not require the same kind of protection of, let's say, the work of fine literature might, its useful life is shorter.

MR. MOSER: My tendency again based on the feelings is, yes, it is shorter, and probably will continue to be somewhat shorter.

And one further answer, I would also take exception to the five years being long enough. But to give you a specific number beyond that is very, very difficult.

"Should copyright protection of computer software be limited to the right to make and vend..., or should it extend to use of the program...?"

We feel that it should be extended to the right to make or vend copies. We qualify this by adding that there would have to be a major difference between the purported copy and the original in order to exclude that copy from infringement.

MR. NIMMER: May I ask at that point, you were here this morning and heard my hypothetical about our list of top lawyers and what have you.

How do you see computer program protection in that

light; that is, if these instructions that I give my hypothetical assistant to go out and find the 100 lawyers by following the standards I suggested, would those steps per se that I have outlined be regarded as protectable under ^{copyright law -} if it were put into machine-readable form, would the steps per se be protectable?

MR. MOSER: Yes, with some qualifications.

The object that you want to get we don't feel should be protectable.

MR. NIMMER: The idea of a 100 top lawyers?

MR. MOSER: Right. But the way that you get it we feel should be somehow protectable.

MR. NIMMER: As distinguished from merely the language that I write out about doing it, the actual steps of going to the courthouse, looking up the courthouse records, comparing the number of won cases with the number of lost cases, et cetera, those various steps, quite apart from the language you think should be protectable?

MR. MOSER: Yes.

MR. NIMMER: And that is what you mean by protection for a program?

MR. MOSER: This is what we think is desirable.

MR. NYBORG: Mr. Nimmer, if I may point out one

further aspect on that. We have discussed internally with the group, as far as pursuing that analogy I think it is important to recognize that by nature computer instructions are much more specific and detailed than the kind of instructions you reference in your hypothetical. They also have a much more specifically operative nature, and that once in the machine context they have a much more specific function than the verbal instructions.

MR. NIMMER: I am not sure where that takes us.

MR. NYBORG: It is a difference in degree, but I suggest that the difference in degree is sufficient to possibly make your analogy inoperable.

We have always had the instruction sets, but instruction sets in the computer context are considerably more meaningful. They operate -- to clarify -- they operate in a much more specific level.

MR. NIMMER: But if I were more precise to my non-machine assistant, and I told him exactly how many steps to take to get to the place where the records are contained, and was precise at every step, beyond what ordinarily one would expect in human-to-human contact, but if I were that precise, then would it be analogous?

MR. NYBORG: I would argue that it wouldn't.

Again, the difference is in degree. If you speak literally, the instructions that go to the computer are in the order of thousands or hundreds of thousands, and they are not that specifically detailed. In principal I believe in the analogy, but I believe the difference in degree is quite significant.

MR. MOSER: If I could jump in where angels fear to tread.

If your instructions were, Mr. Nimmer, to a human who could do nothing beyond or different from what you instructed him to do, and you gave him such a specific degree ^{of instructions,} and your entire field of creativity or livelihood were to give instructions to that sort of a being, then the analogy might come closer to what we are doing.

MR. BRIGHT: I think, also, Mr. Nimmer, although I wasn't here, I heard secondhand your analogy which I thought is a very interesting one; but I think seriously that you would come much closer to realism if you thought in terms of instructions to a player-piano on a roll of old-fashioned wide paper tape than the kind of things you would give to a human, which without his intelligence are really not very

meaningful; and, furthermore, the writing down of which are totally incidental. And, in fact, the visual representation of which is incidental to the effort, and cost and value involved.

So I think in that sense --

MR. NIMMER: In other words, the expression is really unimportant?

MR. BRIGHT: Exactly. In the case of a computer program quite seriously the program is, in fact, a machine. Some programs are, in fact, our company makes a point of this, some programs are substantially machine independent, but will do precisely the same thing that different computers and in some cases different kinds^{do.} So that the program is in many ways a machine; and, furthermore, the costs and values in creating each step may be very large compared to the cost of transcription.

MR. PERLE: To develop the analogy of the player-piano, what would be the program in the player-program, certainly not the music roll, because that is not what the machine is instructed to do; that is the result of the computer program.

MR. BRIGHT: I think that is a poor analogy.

MR. PERLE: What would be the program in a player-piano?

MR. BRIGHT: Well, I think in the case of a player-piano, the program is probably tied up in the timing mechanism and the spring motor and a set of gears to turn the drum that pulls the data off the paper tape.

MR. MOSER: With regard to the right to use, our response depends on the definition of "use," of course. If "use" means the execution of a program obtained not by copying, but by some other means such as stealing it, then copyright protection should make such use illegal.

And, again, the word copyright is in here primarily because that is what your questions addressed.

I would like to say just that protection should make such use illegal. The point follows also from our definition of "copying" which I will go into in a minute. If, however, "use" is defined as writing a program, a substantially different program, to make a computer achieve the same result as it would

in execution of a copyrighted program, such use should not be illegal.

MR. MILLER: You heard the discussion this morning about performance?

MR. MOSER: Yes.

MR. MILLER: Well, what is your reaction to that since it is not covered by either part of this paragraph?

MR. MOSER: The performance -- again, remember I am far from a lawyer, far from a dramatist --

MR. MILLER: There is a legitimately purchased copy of a program by A; A lends it to B; B puts in B's computer.

MR. MOSER: I don't think that our members feel such a thing should be permitted. And I know that you referred to lending your book to a friend, and again it is tough for us to match these things up because to us software is different, the programs are different from a book, or anything else that we are able to define. It is something wholly different. That is why it is so tough for us to say it belongs to copyright law or it belongs to patent law, or even for me to answer your question.

MR. BRIGHT: May I suggest one clarification in wording? This question of what do you sell. When you authorize

— someone else to use a program, there is a lot of controversy within the field.

Now we chose almost ten years ago to use the term "usage license" ~~for~~ what we sell under clearly specified conditions. I think most vendors in the field will take the position that that is what they are selling. When you sell a program, you typically sell life-title interest, including the right to sell it to someone else. But when you sell a usage license to a user, I think you have now described what the transaction consists of.

MR. MILLER: Well, if that is the case, aren't you fully protected by the law of contract, and what more needs to be provided to you by the law of copyright?

When you sell a player-piano with all the gears and timing mechanism, as long as the gears and timing mechanism do not meet the standards of patentability, nobody would ever suggest that there's copyright protection in it, or that there is any secondary restriction on the purchaser of the player-piano to resell it unless it is in the original contract.

— MR. BRIGHT: One outstanding difference and that is the user perforce must be a manufacturer. You cannot execute a computer program without copying it in a form which can be

used by any other user. Consequently the act of copying for use constitutes in many ways remanufacture.

MR. MILLER: I can refer to the analogy of the player-piano, but I still ask what do you need from copyright that you don't already get from contract?

MR. NYBORG: Professor Miller, if I might make the suggestion, contract protection will give you protection with regard to parties to the contract and not others in general, and there are uses of the kind that you are describing by non-parties.

MR. MILLER: Yes. But ^{add} the law of torts as a supplement to the law of contracts and you can get a third person inducer to the breach.

Now what do you need from copyright that the common law or contract doesn't give you?

MR. NYBORG: For example, the thief example; if someone steals a magnetic tape version of a program and subsequently proceeds to the kind of use that you are describing, there is no contract breach necessarily.

MR. MILLER: No, but the law of torts is going to take care of him as a converter, and indeed criminal law might also take care of him.

MR. NYBORG: Yes.

MR. MILLER: In other words, you want some form of protection. I would like to know what it is and why we should try to force fit it into copyright as opposed to Mr. Perle's suggestion this morning that we are really talking about something in the business competition or unfair business practice business area, not copyright.

MR. MOSER: I wouldn't for one take issue with the fact that it needs to be forced into copyright. In fact, we lean towards protecting without forcing it into copyright. But we do believe there needs to be more protection, and the only reason I can give you for this is that people who are presently trying to market software don't feel that they are safe in doing so because copies can be so easily made and their efforts can go down the drain so quickly.

MR. MILLER: Of course. So could a number of other industries wholly unrelated to the computer industry claim that they need more business competition protection.

MR. MOSER: And I, of course, couldn't argue that one way or the other.

"Question No. 3. What constitutes copying of a computer program?"

We feel that copying should encompass making a new version (even in another memory medium), including putting the program into the memory of a computer for execution, or for storage and/or for what they call output. We also suggest that any man-readable and/or machine-readable format should constitute a copy; further, copying should include conversion from a language -- and the discussion this morning I think made clear the difference between source language and machine language -- to another language and any simulation by one machine or one computer of another computer's language.

"Question No. 4. What type of additional legal protection for software is needed, as distinguished from more effective enforcement of the present law?"

The members I contacted again felt that this hearing or group of hearings will maybe we hope lead to more specific treatment of software in copyright, and/or patent or some law; more specific treatment is all we can really hope for. We do not view stronger enforcement of existing law as an adequate solution.

These are feelings that I get from people who are

again engaged in the vending primarily of software.

MR. PERLE: Does software mean program or does it mean other types of input?

MR. MOSER: Normally, what I think our standard usage is-it means programs or groups of programs. There are people who will extend it to data bases or masses of filed information.

I think I am right that the normal usage is program or groups of programs.

MS. KARPATKIN: Do you use flowcharts?

MR. MOSER: As software?

MS. KARPATKIN: As software?

MR. MOSER: I would include them as supporting documents for some sorts of software, but not as software per se.

MS. KARPATKIN: Should they be copyrightable, too?

MR. MOSER: I'd rather not answer that. I don't have a good feel for that.

MR. NIMMER: May I try another analogy? I need analogies in order to analogize areas that I feel at home in, and see their similarities or differences.

Take what is called a television format, the idea for a program, not the story per se, but a game show format.

Somebody comes up with an idea to do a quiz

show based upon guessing the retail price of products; you guess it and you get the product.

Somebody writes out a format. This is the basic gimmick of the format, but maybe it is a little more specific. You choose the contestants in a given way, and the master of ceremonies will stand in a certain place, the contestants will be in a booth or something of the sort.

The format does not purport to say what anybody, in fact, says on any given program. It just sets up a situation. In other words, directions to the contestants and the master of ceremonies as to how they go about playing the game on television.

Now that kind of a format is not generally regarded as protectable as format per se. The actual writing out may be. Nobody may repeat what is said in the format per se or the particular words, but the idea of that for a game show is not per se protectable by copyright.

Now is that analogous to a computer program, or is it different in principle in some way?

MR. MOSER: It seems that it must be different in principle, Mr. Nimmer.

We again don't propose that anybody be stopped from

making a computer do the same game show, so to speak, or have the end result.

MR. NIMMER: No. But it is just not the end result. The end result there might be somebody wins and somebody loses. But it is how you get to that result where you have instructions on what kind of skills are called into play, and the general directions of what the participants should be doing in order to reach this end result.

MR. MOSER: But you said when it is written down in detail it would be copyrightable? Again, I don't know about the copyrightability of even that idea.

MR. NIMMER: Just take my word for it, that the format per se is not protectable on a television show, and I am trying to see whether that is like a program or whether it differs in essence in some way.

MR. MOSER: I think you and I have the same difficulty. You are trying to fit it into the copyright law, and it can't exactly be fit in. Software programs cannot be fitted into copyright.

MR. LACY: Mr. Chairman, I wonder if the difference here is the relative weight of the written expression as distinguished from the embodied idea and the two formats and

the two concepts; in that ⁱⁿ the instructions for compiling the list for the 100 lawyers or in the format of the television show, you are dealing with a situation in which the idea is in real life conveyable orally if necessary, it is apprehensible by an intelligent TV producer and/or researcher in the courthouse in a generalized description. If you write it out the writing is almost incidental, the fact that the writing is protected does not really protect the idea. You are dealing in the other case with a written set of instructions that may have been pointed out in terms of 50,000 steps. The idea has no meaning in real life except as it is written down and written down in precise machine comprehensible form, and all that is sought to protect is that writing down, but once you have protected that you have, in fact, protected that specific idea of a skillful program. I understand that this program has a certain architecture, and on top of that, architecture in another case. I don't think there is any difference in that theory, but the expression is copyrighted, although the idea isn't, but in this case the computer program ^{is;} in the former case the writing is almost incidental to the idea. In the second case the concept has no real meaning until the labor, the enormous labor, that of producing this

multi-thousand step algorithm formula, has been gone through.

MR. MOSER: I wish I could have said it as well.

MR. NYBORG: May I attempt to make a useful distinction when it is very articulate, one I think which reflects similar feelings to most practitioners in this field. I think most of the practitioners who feel that software protection is appropriate feel that it is obviously appropriate for the code itself. The way the programs are coded it is possible to write essentially the same program instruction by instruction, say, in a different language or in the same language using different variable names which give it a different superficial appearance, but it is so close to the original coding that many practitioners feel that it is a copy.

Now there are deeper levels of structure in computer programs, more conceptual levels. Flowcharts can represent a very broad conceptual level in a program, but I think the deeper you get into those conceptual levels the less people feel they should be protected by the underlying sequence of steps.

MR. PERLE: The "Less" did you say?

MR. NYBORG: The less.

MR. NIMMER: The more abstract?

MR. NYBORG: The more abstract, the farther you get away from the actual code; I think any practitioner would feel that there is a fairly specific level of steps, if you go right underneath that code, step by step, that they might want to protect.

And again this is just a broad conception of what practitioners seem to be saying.

MR. PERLE: Well, one of the things that Ms. Karpatkin said in regards to that I think bothers me a little.

There is no question in my mind that a flowchart is copyrightable, none whatever, in the same way that a set of instructions on how to make out of balsa wood a spad from World War I, a model airplane.

There is no question that the written representation, the flowchart and the written instructions on how to build that airplane are copyrightable.

There is also no question in my mind that the copyright proprietor of the instructions on how to build the airplane cannot keep somebody from building the airplane and following the instructions and using the idea as expressed in that flowchart.

I don't know if that is helpful or not.

MS. KARPATKIN: You are expressing it in a slightly different way.

MR. PERLE: You are applying it, and from what I hear today I think what you are doing here, if you will, and correct me if I am wrong, is going from the flowchart to the specific application of the ideas that are contained in that flowchart as you actually build with your instructions.

MR. NYBORG: Well, I would differentiate between the ideas and the very specific set of ideas about the instructions that underlie the code. Flowcharts can represent programs structured at many different levels, a detailed level, a very broad level. The flowchart is in itself an expression. It can be an expression in the broad concept of the program or it can be literally down to the detailed instruction by instruction. I don't know if we can really get much help from looking at the flowchart idea per se.

MR. PERLE: Well, to get back to the instruction idea, is it necessary from the standpoint of those of you or in your industry who produce programs, is it necessary that you have control, economic control, over the application of the program, to use the program clearly, yes? Clearly?

MR. NYBORG: I would defer to my witnesses, but I

think it would.

MR. PERLE: It would have to. That is what we have been saying.

MR. NIMMER: Right.

MR. PERLE: In one way or another you have to get protection. So that is clear. The only question I think to this Commission now is ^{Is} copyright, the right framework or the right form for the protection? "Concerning protection, clearly they say they have to have it. I wonder who says they don't have to have it. Anybody who would say that protection need not be afforded programs?

MR. MOSER: Some of our very members. There is a diversity of opinion. Some people feel that a lack of protection would make it easier to gain access to other people's works freely instead of paying for it. But whether or not that is in the public interest or the business interest is open to a lot of question.

MR. KOLLER:

Some of these software houses believe there is adequate protection now, not in the copyright law per se, but in the trade secret and contract area, and they wonder what the brouhaha is about.

They say, "We don't need any of this." Yet these same companies I find copyright

their proprietary programs. They also copyright their documentation as much as possible, which are more conventional documents, of course.

MR. PERLE: Some people wear belts and suspenders.

MS. KARPATKIN: Is it so much a question of what should not be protected as it is a question of whether all the interests that need to be assessed are going to be considered? Even if nobody comes forward and says, "No protection," we still have to worry about interests to be served if we don't have copyright protection in these programs. And it is our responsibility even if there is no advocate for them.

MR. LEVINE: Tomorrow morning we are going to hear from EDUCOM who, I think, has a different position on protection of computer software.

MS. KARPATKIN: One area that might be helpful to us is ^{if} you could analogize to other works which are not protected by copyright and for which there is no claim of copyright made, and where the ordinary business transaction and legal relations provide sufficient copyright. I think straight off in the course of my own work - mailing lists; lists of subscribers to magazines are constantly rented and exchanged and are not

copyrighted, and moreover they are stolen.

MR. PERLE: They are not published, therefore, there is no need for statutory copyright. They are copyrighted because of the common law copyright, every one of those lists.

MR. KOLLER: Did you say these are not stolen?

MS. KARPATKIN: They are stolen.

MR. KOLLER: What about the typical professional societies that publish their membership directory, and people could very laboriously copy those who are listed.

MR. SARBIN: A customer list is a classified trade secret?

MS. KARPATKIN: Yes.

MR. KOLLER: Provided you keep them secret.

MR. NIMMER: Well, but you don't violate the secrecy by an individual sending out mailings.

MR. KOLLER: Okay.

MR. BRIGHT: If I could bring up something.

If one follows a textbook approach of computer programming, one studies an operation, one develops a flow-chart outlining the process that is to be implemented in the computer code, and the flowcharts may be at a very superficial level indicating very few steps of how it can be accomplished,

they may be much more detailed going down to a first-rate instruction level as you have indicated, but then that might be analogized to an author developing a plot for a story, and a basic set of characters. But once the author has done that the author then has to choose words from the English language to implement the story in words that communicate to another human being who has a mind that can interpret it and fill in gaps and supply background, the computer does not have that capability, and the coding that has to be done to implement a flowchart, I have heard ^{the} figures; coding, the testing, the debugging, once a flowchart is developed for a computer program may represent the most substantial part of the investment in developing the program.

Now how that compares with the analogy to the author composing a literary work, I am not sure, because I don't know how one can compute the author's investment. But if what you are saying needs to be protected is the investment that goes into the developing, the testing, the debugging, and the developing the set of usable code, that may be something very different from protecting the underlying process which is expressed in the flowchart, as it were.

MR. MOSER: That is the part where most of the

investment usually is, but many of our people would like to see the protection of some sort go just a little beyond the fact that it is ^{the} most costly part and, if you would, protect the structure, not the result, not the idea, but the thought process that you force the computer to take to get that result.

MR. CARY: Mr. Chairman, I would like to ask this question.

I think this morning it was said that if you give a computer programmer a flowchart and tell him to process this, and if you give it to a 100 different programmers you might get a 100 different programs. In other words, each programmer is going to use his own style and so forth to come up with an answer.

Is that a general statement that you would agree with?

MR. MOSER: I remember the broad testimony. I don't think that you were giving him a perfect flowchart which could be in varying degrees of detail, but giving him the problem; give a 100 programmers a problem it is likely that they would all come up with different ways to arrive at the same solution.

MR. MILLER: What do you mean by "different ways"? The model that has been set before us is a program with ten to 50,000 instructions.

MR. MOSER: All right.

MR. MILLER: Now when you say you give a problem-solving exercise to 100 different programmers, and they each produce a program of ten to 50,000 instructions, how different are they?

MR. MOSER: They could be different to the degree that none of the 100 would be the same in entirety --

MR. MILLER: Yes.

MR. MOSER: -- and that many of the 100 would not be duplicated in any way.

MR. MILLER: That every one of the ten to 50,000 instructions is different?

MR. MOSER: Well, that is conceivable.

MR. MILLER: Conceivable?

MR. MOSER: Well, that is hard to say.

MR. KOLLER: I think Mr. Moser is trying to give an accurate answer; however, you must recognize that every machine has a finite vocabulary. The same instructions will be used, but the sequence will be rather different.

MR. MILLER: Okay. I still go back to a question or concern I had this morning.

First of all, although the model of the program with

ten to 50,000 instructions has been laid before us, I assume that there are programs with a thousand instructions; that is, much smaller programs.

MR. MOSER: You are correct.

MR. MILLER: That may be probable programs in terms of the results that they achieve.

I am concerned with a number of different things.

First, the finiteness of the types of commands individual machines can react to, and my concern that the computing languages aren't rich enough to permit infinite variations to achieve the same result, so that if you start creating monopolies in certain expressions, you are blocking access to achieve the result by putting artificial constraints on the instructions that people can give the machine to achieve that result.

I am also concerned about the smaller program and the possible impact that monopoly protection over expression in the sequence of instructions might have in a smaller program.

I am also concerned about the possibility that over time, with maturation in the programming arts, and a real nationalization in the techniques certain set modes of programming, certain kinds in combinations and sequences of instructions to

produce sort of group results, might be well accepted in the trade as the efficient way to make this machine result this result and to have recognized copyrights in that sequence of instructions five years earlier, you are going to prevent other people who come to the art a little later from using their machine in the most efficient way.

MR. MOSER: Your concerns are very valid, and we share them, which is precisely why it is hard for us to go for either copyright or patent law.

There is a question of degree of the size of the program, and how to protect any program and still allow the creativity of other programmers to exist to solve the same problem in a different way, because there is not an infinite number of words available as there almost is in the English language.

MR. NYBORG: Professor Miller, if I can make a technical distinction.

I think that the variability of computer programs if given a finite vocabulary depend somewhat on how you define

"the same instruction," because although a given computer language, say, FORTRAN, may have 50 specific instructions,

those are instructions essentially with unique formats, that they each operate on different variables, and given different variables that they can operate with and the ways they can operate on those variables, the potential instructions is much, much larger, if not --

MR. MILLER: Okay. Let's say we want the machine to compute withholding tax for each of 30,000 employees, and a 100 different programmers doing the master payroll program, which may have ten to 50,000 instructions to it, may come up with 50 or 70 different variations on how the machine does the limited job of computing withholding tax for each employee.

In five years' time the programming art may have achieved a way of getting the machine to do that with ten lean instructions.

Is it socially desirable that in order to do an end run and a soft-shoe routine around a copyright in that program, that other programmers then have to go through the inefficiency of producing a sequence of a 150 instructions to get the withholding tax on the individuals just because someone has a copyright in the ten instructions that now everybody understands is the most efficient?

MR. NYBORG: It is probably not, but would that not be

an independent creation, too?

MR. MILLER: I don't know. If it is not patentable you see, we are all admitting, although we are not truly seeing the consequences of admission, but the expression, the linguistics, the words are irrelevant.

And if we go back to John Hersey's position of several meetings now, my God, you are at a copyright once you have recognized that.

Well, if you are at a copyright because you know the words are irrelevant and you are not in patent, it is not sufficiently novel or inventive or an increment over the prior art, then doesn't something in our society say it is up for grabs?

You know, I am really just asking these questions.

MR. NYBORG: I think that the practitioners are asking them, too, and I think it is clear from the exercise we went through in preparing this testimony that there is a fairly large consensus for the need for protectability, and there is very little consensus on how to stuff it into a particular legal document.

MR. SARBIN: I have a question. Are any of you lawyers?

MR. KOLLER: Yes, I am.

MR. SARBIN: I am glad to hear that because I was going to ask if you had talked with your lawyers.

MR. SARBIN: There being some lawyers here on the Commission struggling with the concept, eager to protect what should be protected, eager to give the public what the public should have, but not being willing to fit this thing into one category or another with some shoe-horn necessarily, you know.

I was worried from the testimony this morning, and that is why this afternoon my worry has now disappeared, that maybe someone had not asked his lawyer about this, but had decided here was copyright; therefore, let's move it into copyright because the broadest protection may seem to be there.

MR. NYBORG: Let me put it in the context of his testimony, if I may.

We have attempted to bring to the Commission what the practitioners in this field see as a need for software protection and the characteristics that protection should have.

The average practitioner in this field is not a lawyer.

MR. SARBIN: Yes. I think it is worthwhile to suggest

the average practitioner in any field should pay attention to his lawyer if we are going to be dealing with the question of what the law will provide as protection for both the public and the practitioners. That is all. And I am relieved to hear that there are lawyers here.--

MR. KOLLER: So I am.

MR. SARBIN: -- who are struggling with the same question.

MR. KOLLER: Is it fair to ask the Commission a question?

I would like to ask Professor Miller the following:

A man finds that there are a thousand sequences of instructions routine which everybody has to recreate. Suddenly someone discovers that ten instructions in the following kind of sequence will do the same job.

Has that man not made a very valuable contribution to technology?

MR. MILLER: Terrific. Terrific. Sensational.

That doesn't help me, though, in market, and economic and social philosophy which supposedly underpins, underlies the United States, that doesn't tell me whether he is entitled to a monopoly in it.

I am sure the fools at Chrysler in the mid-fifties who came up with the big fin thought that they had made an innovation and creation for automobiles that they would have liked protection for, but nobody would have suggested that you can protect the designs of the fin on the Plymouth.

In other words, all I am saying in response is, it is not every creativity, it is not every drop of sweat in our society that is entitled to protection. It has got to stand and fall in a competitive environment, and your economy production, or your speed to the market-place, or your advertising, or the quality of your product gets you the larger share of the consumer dollar, not a monopoly. And this Commission, ^{it} seems to me, can't simply respond to a statement from a group, "We need protection," by acting as some sort of welfare agency and handing out protection. It has got to react to some larger philosophical principles, and that is why we are trying to work along with you to see if anything fits anywhere.

MR. MOSER: And we are trying to work along with you.

In all due respect, Mr. Sarbin, as far as asking our lawyer, we did not have time to ask him let alone wait for his answer.

MR. MOSER: Shall I continue?

JUDGE FULD: Yes.

MR. MOSER: We do feel that software and this word firmware is a sufficiently unique commodity that it may not be possible to properly fit it within existing legal doctrines of patent or copyright. Software is in a sense a tangible "concept;" it is not tangible like a device, but yet one can use it as collateral for a business loan. You can oftentimes go to your bank and borrow money on it. Fitting software into existing law may well require compromises which would not be necessary in a totally new concept of protection

We do believe, as you pointed out, Mr. Miller, that protection is necessary, and we in DPMA believe that, as users, not so much as vendors, of the software, as the consumers, if you will.

"Question No. 5. How can additional protection for software be granted in such a way that it does not lead to monopolization of the basic ideas...?"

This one is really tough for us.

We feel that by protecting a system or a program in its entirety, and by requiring substantial duplication in order to constitute infringement, we can achieve this goal.

In other words, it should be permissible for the end results to be obtained in a number of ways, in many different ways.

However, as stated above, and this is a totally arbitrary figure based on, you know, all the years of experience and in looking at programmers, a group of experts could sit down theoretically and look at a program and decide whether or not it had been copied in principle from the one claiming infringement, if you will.

MR. PERLE: What do you mean by "copied in principle"?

MR. MOSER: Well, copied -- in other words, did I take his program, sit down and just change a few things and call it my program.

MR. PERLE: You say "his program." Were the principles and ideas his?

MR. MOSER: "Principle" is a bad word for me to use, I think.

MR. NIMMER: Don't you mean ideas or some expression using very rough language?

MR. NYBORG: I think what Mr. Moser is talking about is to take somebody else's code, the written instructions, and change enough of them so that you think you can call it your own, when does it cease to be a --

MR. PERLE: In other words, you are saying, "Just don't rip us off?" is what you are saying.

MR. NIMMER: Look, doesn't it go back to this whole distinction between idea and expression in the law of copyright?

MR. MOSER: Well, what we are talking about is how much is fair use, I think.

MR. NIMMER: I think it is that, but the point is when we talk about copyright protection, the expression, that doesn't mean that somebody can change a few words here and there, and then it is a different expression, and hence it is not an infringement. Expression is defined as a word of art, it still may be infringement if there is substantial similarity of expression, but not identical expression.

On the other hand, at the other end of the spectrum is, if you take the essence, the idea on a given level of abstraction, and it may be taken without it being copyright infringement, and it is thought to be in the interest of society that it should be true that one cannot take a monopoly on an idea, and again, you see, this in the world of literature and motion pictures and television all the time. People have ideas they want to sell, and they may be very

valuable ideas in terms of monetary remuneration for the ultimate product, yet copyright does not attach to the idea and it is thought that it probably shouldn't, we should be free to use each other's ideas. And I guess one way put it, we are struggling with whether the essence of the sequence of steps, 1,000, or 10,000 or 100,000, falls on the idea or the expressions on that line.

MR. SARBIN: I am sorry. Go ahead.

MR. DIX: Let me just follow that up with a word that I haven't used recently -- maybe it was used this morning -- and try to get at what it is that is protectable.

Is it in a sense a substitute for the word "idea" the word "logic" and the way, as I understand it, the computer uses it?

Is it the logic that needs to be protected, that ought to be protectable somehow?

MR. MOSER: I am tempted to say yes, except in the way computer people use logic it is much more than an idea.

MR. DIX: Let me put it in another use.

A concrete operation that in library and publishing related things is something that one has to face from time to time and alphabetize.

Suppose I am publishing a dictionary, and I want to get the type set up and so forth.

The object of the program is to alphabetize a string of 10,000 words to the third letter, let's say, something like that.

Now there must be several different logics for getting one there. I don't really know how it is done, but I believe there are a variety of ways.

It is not the whole process of alphabetizing that ought to be copyrightable, is it?

MR. MOSER: The goal of alphabetizing?

MR. DIX: Yes. To generalize.

MR. MOSER: That's correct, in our opinion.

MR. DIX: One breaks that down to a series of steps, and is it the sequence of steps that is copyrightable or protectable? I am just trying to find exactly what it is you need to protect.

MR. MOSER: We believe, Mr. Dix, that the steps and their sequence together should be protectable.

MR. DIX: Even though the same steps may take different forms of words to describe, that is, the documentation might not be exactly the same.

MR. MOSER: Exactly the same, right.

And, in fact, if I am not mistaken, in that very example was one of the few patents issued to the software business. If somebody was unique enough to come up with a new way to sort --

MR. CARY: Mr. Chairman, one follow-up question.

This morning you were here, the question was asked whether the organizations that were testifying had ever considered the possibility of unfair competition. That is, had they ever testified to this Federal Unfair Competition Law which has been around many years.

May I ask you whether any of your organizations have considered the Unfair Competition Law as a means and have testified in the past on that?

MR. NYBORG: AFIPS has not. These gentlemen may speak for their individual organizations.

MR. BRIGHT: Mr. Cary, I think the group I mentioned earlier is considering I believe that there are five basic kinds of protection concepts.

The legal distinctions were never clear in my mind. It is the difference between contract law, unfair competition law, such as it is, and other aspects of what has to do with

agreements between people and violations of those agreements either by the parties or by third parties. But it would seem, though, that the essence of what people do feel is protectable is what was obtained from somebody else's work. And I have never heard of any serious suggestion that original creation should be prevented through the existence of some prior creation of the same thing.

Now it is true that we have heard recently that in patent law in this field, in fact, a patent has been granted to a computer program, and it was my impression there has been litigation in an effort to prevent the use of original creation, the use of something created not in any sense through copying, and my feeling is that most people in the field, including those with products to sell and protect, would argue against the prevention of the use of something developed originally by the user.

MR. CARY: I threw out the idea just because it seems that in your field one of the things that you are really after in getting protection is to prevent somebody from ripping you off, as it were, and it seems that some of the activities that could go on in the software field do amount to unfair competition. I am just inquiring as to whether that is a field

which should be explored, whether you think it is.

Do you think copyright is the real answer here?
That is what it is really coming down to.

MR. MOSER: In answer to your first specific question, DPMA has not testified in regard to the unfair practices.

In answer to your second question whether it is a copyright or patent or not, that is the very thing we are addressing.

MR. CARY: May I suggest that you talk to your lawyers about that possibility just to cover your own tracks, as it were.

MR. HERSEY: Mr. Chairman. I would be very interested in hearing the rest of the presentation, particularly Mr. Koller's presentation.

MR. MOSER: I can be very quick here.

JUDGE FULD: Please proceed.

MR. MOSER: "Would stronger copyright protection for software encourage increased sale...and less reliance on restrictive licensing arrangements...?"

We believe that it would, because the vendor would be more likely to realize profits from good products. We believe

he is more likely to realize ^{profits} from his efforts. We believe he is more likely to properly advertise them and make them available to us as consumers, especially if the redress of injury is not prohibitively expensive for him to undertake.

"How should the copyright notice be affixed...?"

On any man-readable document we feel it should be shown on at least the title page and preferably also at the end, mainly so it can be just some way so that when you pick it up you are going to see it.

"In what form should registration copies...be deposited...?"

As a minimum, the program listing and a narrative of the purpose should be submitted. There should be latitude to also enclose other supporting documents such as the flowcharts. As far as the form, whether it should be on film or magnetic tape, microfilm or other media. We do not feel that materials beyond a program listing and a narrative should be required. There are many different ways of developing programs, and not all programs for instance require flowcharts; there are other types of supporting document that can be just as valuable. Very few things are common to all programs. One of the things, so far as we know, that is common is a final listing or the

availability of the form.

"How would the changes which you suggest affect the proprietors and users...?"

We are hopeful that by protecting proprietors, we would make more products readily available. The proprietors would have greater assurance of commercial return, and we would enhance competition by offering multiple but different solutions to similar problems. The increased availability of software would in turn benefit the users. We don't foresee protection for software having a significant restrictive effect on the users, again given the things we have discussed above.

We want to thank the Commission for a chance to testify.

JUDGE FULD: Thank you, Mr. Moser.

Mr. Koller.

MR. KOLLER: Now in making these introductions Mr. Nyborg said we don't all speak as individuals, although there are similar positions of groups, or committees or members of the societies.

I am speaking strictly as an individual. I am not a member of the Computer Society and, therefore, am not totally informed as to what their viewpoint may be. But I have some

background, as does my co-author on this paper, Professor Macon, on both sides of this thing, and the legal side and the computing side. So I am going to go into this very quickly because of the hour.

First of all, we must recognize that over the years technology has developed a distinct software, and hardware and firmware so that ^{for} every kind of hardware that you conceive, and it becomes more and more true as time goes on, we come up with absolutely equivalent software and vice versa.

Throughout the morning and the afternoon, the more we have talked the more I have found the question raised as to what actually is the definition of hardware program? whether we mean software in general? There are many answers to questions like that.

Now in the context as we here before the Commission, ^{are,} dealing with copyright problems, we all make the assumption that copyright is the appropriate and desirable kind of protection, and the problem, I think, we are grappling with is for what and how far should we go.

My own bias is that the protection should be worthwhile, the more it protects the conceptual content, as we have been saying, ⁱⁿ the ideas embodied the listing of instructions, the better. Now at what level of abstraction I am not prepared to say,

but I think that what people are really trying to protect is their ideas, not the expression of those ideas at all.

I would say that you would have to really make a copy of the program per se, unless you intend to use it in some way like selling it or primarily by executing a program, by actually writing a program against some data.

I think I would like to reserve answers to specific questions as questions from the Commission.

JUDGE FULD: Are there no questions?

MR. HERSEY: What answer do you suggest other than copyright protection that have been suggested, could you give us some models of those?

MR. KOLLER: I can give you an example of one in connection here briefly, a two-stage disclosure patent.

Well, I won't try to give any lessons or lectures on what patents are all about, but basically the exchange of disclosure of the invention for a very restricted monopoly is the quid pro quo invention of the patent.

Now the suggestion here is the two-stage -in order to get a patent on a computer program, the application would contain something of the relatively abstract level, the kind of thing, an algorithm, for example. You get enough

documentation to prove that it is operational and useful. Of course, the justification of the full disclosure would not be published, but would be contained in the files of the Patent Office until the patent got its prototype, and then it would become public property, and I think this might encourage people to obtain patent protection for their computer software. That is, they would have the benefits of the patent monopoly that the patent carries along with it, and they would not at the time they get this monopoly have to give the whole thing away to the public. But eventually the public would gain from this when the patent expired.

MR. HERSEY: I take it there are models that you mentioned.

MR. KOLLER: That's right. One other has happened and that has been copyrighted for patent protection, which means quite readily visualizable.

JUDGE FULD: Are there any other queries or comments?

Apparently not.

Do you have anything more, Mr. Nyborg?

MR. NYBORG: No, I don't.

I just want to make one other offer, Judge Fuld, and

I leave this to Mr. Bright.

I think Mr. Bright's comments were through somewhat of a miscommunication between us more prefatory than we and perhaps the Commission were expecting.

If the Commission feels that after the questions have already been asked, they would like him to go over specific responses we could do that, or we can let the record stand as it is now.

JUDGE FULD: I think the questions probably covered the field.

MR. NYBORG: Fine.

JUDGE FULD: Thank you all again for coming here. You have been most helpful.

MR. SARBIN: The submissions were very enlightening.

MR. LEVINE: And we are happy to receive any additional material that you may wish to submit to us.

MR. KOLLER: Do we send it to you?

MR. LEVINE: To our staff at the CONTU office.

JUDGE FULD: I think we will take a break now for 15 or 20 minutes.

(Recess of the proceedings).

COMMISSION DISCUSSION

JUDGE FULD: Ladies and gentlemen, the agenda calls for possible discussion by our membership on the testimony today.

I don't know whether the questions that were posed and the answers given by the Commissioners served as our discussion, or whether there is something more to be said.

Does anyone here wish to contribute or address themselves to questions on the testimony that was given?

MR. NIMMER: Well, one thing that I think that came out -- I am not a 100 per cent sure-- is that really what we are talking about is not the expression, but the sequence of steps. I am not saying the idea, although that is the idea theory, it's the sequence of steps that we are talking about protecting. At least that is the testimony this afternoon.

This morning that was not as clear.

MR. SARBIN: Was it not really clear, however, that when someone was talking sequence of steps, they sometimes meant expression, and when they said expression they sometimes meant sequence of steps?

JUDGE FULD: I think one thing that came out is there certainly should be protection as to the ultimate idea that is

formulated.

MR. NIMMER: Well, there is unanimity in that view, but I don't know -- are we going to hear some contrary views tomorrow?

MR. LEVINE: We believe that EDUCOM represents a different position. We hope that GSA will have a slightly different position, too.

MR. NIMMER: But even this afternoon there was suggestion that that was their view. They said they did not represent their constituency. There was some difference of opinion.

MR. HERSEY: Mr. Chairman, I suggest that we would be helped further at our next meeting, it would be awfully good to have some presentation of those alternate ideas that Mr. Koller was talking about, others that have been researched and studied and other ways of going at it besides copyright, patent or --

JUDGE FULD: That sounds reasonable and good.

Does anyone object to following that procedure?

MR. HERSEY: I would like to say that I heard several comments today which confirmed a feeling that this should be dealt with outside copyright law, and perhaps nothing is so

in support
earnest^A of that difference as the notion that programs could
be put up as collateral for bank loans.

Show me a bank that will allow me to put as
collateral an idea for a novel I have, an outline I have, and
I will show you an author living well.

MR. LACY: I can show you a number of publishers.

JUDGE FULD: Then we will put off this discussion
until tomorrow, until after EDUCOM.

Some questions have been asked as to the meeting
of the Subcommittee on^{Photocopying} Guidelines. I had appointed a sub-
committee, but I have given second thought to the problem.
Some of the members have suggested that it might be desirable
to have public members represented on the subcommittee. It
seems to me, however, since the matter is going to come to the
entire Commission, that it would be desirable to turn the
Commission into a committee as a whole and have a staff or
a director to fix, arrange dates for meetings, and then
apprise all the members of the Commission of the meeting that
they will have with representatives of the library community,
and with the publishers and authors.

I really think in thinking the matter through that

it would be ^a much more satisfactory method of handling it.

Now anyone who wants to come, including public members, would be welcome, and might take advantage of the opportunity.

Are the meetings always held in Washington?

MR. LEVINE: They have been, but there is no necessary reason why they should always be held in Washington.

New York might be more convenient to more people.

JUDGE FULD: The representatives, too.

MR. LEVINE: Well, certainly I think that to the publishers and authors group New York is probably an easier place. I am not sure. Some groups are located here in Washington, and other groups are in Chicago and Minnesota and Wisconsin.

JUDGE FULD: Well, is it just as convenient for instance for you to come to New York as Washington?

MS. WILCOX: Oh, yes.

JUDGE FULD: So with your permission I would declare that the Commission act as a committee of the whole to get together with the parties and attempt to formulate guidelines or suggest formulation of guidelines.

I don't know whether the meeting of the Board has

been arranged, has it?

MR. LEVINE: No. What we have done so far is send out a letter on April 21st,^{of} which I sent copies to the Commission members, requesting submissions from the identifiable groups.

JUDGE FULD: You mean groups?

MR. LEVINE: Authors, and publishers and librarians. And I have gotten four responses, three of which requested additional time in which to submit their responses.

MR. LACY: Who responded in substance?

MR. LEVINE: In substance was Williams and Wilkins.

I suspect that most of the people that we sent this to have been thinking about the problem.

MR. LACY: I would suspect they have been thinking about it a lot.

MR. HERSEY: Mr. Chairman, excuse me, mightn't there be a number of meetings held with the principals in the photocopying issue just with the staff of CONTU as first steps to explore the possibility before the Commissioners all met with them?

JUDGE FULD: at a meeting?

MR. HERSEY: In other words, it seems to me that the most desirable thing would be to have the parties themselves reach agreement without the intervention --

JUDGE FULD: I think that was suggested by a resolution in the past that we would be available to attempt to bring them together.

What do you think of this yourself, of yourself and the staff?

MR. LEVINE: I certainly think there are times when it would be more desirable just to meet with the staff, and other times it would be more desirable to suggest that they meet with the entire Commission, or those available, and I guess it is just a question of using my judgment which is better.

JUDGE FULD: I think you ought to apprise the Commissioners of the best possible meetings.

MR. LEVINE: Oh, yes.

MR. DIX: Mr. Chairman, I agree with Mr. Hersey. I think what is needed now is something more like, pardon the expression, "shuttle diplomacy," than confrontation, and if Mr. Levine and members of his staff could serve in this capacity,

talk to one side and then talk to the other side, I think this might proceed better in a smaller group than having the whole Commission present on all of those occasions.

JUDGE FULD: We will see to that.

MR. LEVINE: Yes. There has been a suggestion that in shuttle diplomacy one thing was said to one side and another thing was said to the other side, and I don't want that kind of situation.

MR. DIX: I said that was an unfortunate expression.

MR. LEVINE: I don't want to be put in that position.

JUDGE FULD: Ms. Wilcox, did you want to say something?

MS. WILCOX: Pursuing what Mr. Lacy said this morning, too, I wonder if there is a need to amplify the request for information that was sent out to the parties so that they don't feel that this is a commitment that they are making. If they polarize their position, it would be difficult for them to retract from. So there should be a little bit more generalized, I think it might be helpful, at least.

JUDGE FULD: Yes, I think so, too.

MR. PERLE: As a matter of fact, is there any way of retracting, withdrawing the request for any writing at all, because I think any writings even phrased generally.

has the tendency to cause the position to jell.

MR. NIMMER: A good point.

MR. PERLE: I think only oral.

JUDGE FULD: In any event then to modify what I have said, the entire Commission would be a committee as a whole, but the first steps will be taken by our Director and his staff to see what can be accomplished without involving the Commissioners.

MR. LEVINE: Yes. This really, you have to recognize, does get me, the suggestion that we eliminate the writing, really does get in the position that I am uneasy about being placed in, and that is being told by the librarians, "Now this is our position, but I don't want you to tell that to the publishers and authors," and the authors and publishers, "Well, you know, this is our initial position. This is our negotiating position. I don't want you to tell that to the librarians."

I am very uneasy about being placed in that position.

MR. SARBIN: I wouldn't --

MR. LEVINE: I am not nearly as tricky.

MR. SARBIN: I think I would withdraw the request about the writing. I think it is okay to say that it can be general. I think that is fine. And I think that if one does

not get a writing, one should proceed. But I would be concerned as Arthur is with the effect of shuttle diplomacy, and the words as they are heard by someone. I think we can do it, but let's be aware that he has got a very tough role to perform here.

MR. HERSEY: We might all as well meet at the same time with each other and talk and not have it written down.

I believe that it does put Art in an awkward position to go back and forth between parties in the long and bitter controversy such as this has been.

JUDGE FULD: I think it would be better to have one meeting which Arthur would attend.

MR. LEVINE: Let me just suggest, there is no good way to do this. There are a number of not good ways to do it. I will not say bad ways.

JUDGE FULD: There are no good ways.

MR. PERLE: It may even be that there is no way to do it, and I am serious. This thing has gone on so long, so hard, so tough, that a lot of people have taken positions that they are going to find it very difficult to retreat from even in the one session particularly, because so many people represent not themselves but a lot of other people to whom they are responsible. Therefore, I think the more we can do to ameliorate

to ease, to keep people from being fixed even if it does put you in an impossible spot, I think it is the only way that we are able to make any progress.

We are also faced for the first time with the reality of a copyright law which we never were faced with before, and I don't know if that is going to have any softening impact upon the parties.

MR. HERSEY: There is, however, a new situation which need has been changed, and this does open the possibility for discussion that might not have been possible before.

JUDGE FULD: I think in any event when you meet with them, you ought to let the Commissioners know everything that transpired.

MR. LEVINE: Yes.

JUDGE FULD: Yes.

MS. WILCOX: I wonder whether if in keeping with the spirit of having the committee as a whole work, whether it would help Art at all in his negotiations to some time, if he is going to bring everybody together, ask some of the Commissioners to meet with them.

JUDGE FULD: Well, this is my idea, but I think as

Mr. Hersey suggested in the first instance of having the Director do it, and then after that, you decide, and I think some of the Commissioners would want to attend and they should be asked to attend.

MS. WILCOX: Not as --

MR. LACY: Perhaps when Arthur was sitting down with the librarians, that you and Bill might sit in on that, or if he was meeting with publishers that I might, and if he might meet with authors that John might and obviously Bob. It would be sort of a dual capacity.

MS. WILCOX: I guess it would perhaps be something different. Rather than getting one group, a little more polarization is necessary, or as possible maybe the opposite way, or to get both groups together with one would somehow make it easier for Art and for the parties. I think what we are dealing with is loss of face. The positions that have already been established in trying to come up with something without making it embarrassing to the parties who have already

JUDGE FULD: Taken positions?

MS. WILCOX: Sure.

MR. LACY: There is one practical problem about the witnesses statements that I had in mind when I was talking

about the possibilities of suggesting we just wanted general expressions of intent.

Now these various organizations may have various constitutional problems about submitting a formal statement of position at this stage. You know various committees or whatnot would have to act, and this may make it very difficult to do anything in that formal a character before -- I mean in the time we have got available. And once having done it, then they would have to go back to that same constitutional process and take a different standing. And I have been hoping for something a good deal more informal at this stage of what it is we need to be the consequences of the guidelines without at this time trying to be too detailed about that, the content.

MR. HERSEY: Well, one reason three of the parties have asked for a postponement is so that they will be able to prepare their positions a little more carefully, and they are going to have a longer time to do that.

We are acting under some urgency because we have until September to try to get something substantial done.

MR. LACY: Well, the publishers group will sometime probably short of constitutional procedure, they wanted to do it by the book. A copyright committee would have to

approve the statement, and then go before the Board of Directors, and this in itself takes six weeks, and then it might take two or three more months, whereas, eventually we will say, "This is what we are after. These are the essentials we need and ^{which} ought to be achieved," and I think they might do that in writing, or do that in a discussion in a memorandum if Art wants to avoid the misquotation problem, and then the discussion might then be drawn up and initialled by everybody.

MR. NIMMER: Well, Mr. Chairman, I wonder if that kind of written statement isn't likely to become just a generalization as to be not very meaningful, and in line with Mr. Lacy's point, I would hope that Arthur would be authorized to have a further communication, not saying we don't want anything in writing. If people do want to submit something in writing, fine. That is not, reappraising it, we feel that should be entirely optional with the parties, whether they want to submit something in writing or not, and then go --

MR. LEVINE: As I perceive CONTU's role, if anyone says, "If we get a copy, we don't want to submit anything in writing," there is very little that we are going to say than "You may submit guidelines."

MR. NIMMER: You might do well to emphasize that it is not a necessary prerequisite from our point of view whether or not we have any, and what we are going to do about it if they don't do it in writing.

MR. LACY: Well, I don't think we are quite in the position to require efforts of Fred Buchard or Barbara to be officers in the sense of just inviting people. This is an official body, and it has powers not only in this formal arrangement; but it has the legal responsibility to come up with recommendations, and I think we should not be passive if somebody chose not to participate. We have powers to go further.

MR. NIMMER: I agree with that and I think that should be implicit, although probably not explicit in the whole negotiation; that is, that we may decide to go our own independent line. We have our own objectives and our own integrity and so on, but all I am saying is let's not stand on the written thing as some kind of necessary preliminary.

JUDGE FULD: I spoke with Mr. ^{Kastenmeier,} and it wasn't his idea that we would formulate the idea; we would assist.

Are you suggesting that we would ultimately be able to formulate the guidelines?

MR. LACY: Well, we have a responsibility to report ultimately on what we think ought to be done here.

MR. PERLE: And it may very well be that the guidelines that are worked out are not what this Commission would ultimately come up with as its legislative recommendation, adjudicative functions. They may and hopefully will be parallel. As Dan says so well, we are not an impotent body, nor are we merely, the word has been used before I think inappropriately, good offices. We are not good offices. We are performing statutory functions.

MR. HERSEY: I think we should take what you call a low profile on that for awhile.

MR. PERLE: I know, but we shouldn't forget it.

MR. LACY: For want of a better way of producing an agreement is to go back and forth, you know, and then we may come up with something. You know, for example, very often I doubt if any of the parties involved would have voluntarily entered into an agreement in the present language that came out of the committee.

I also suspect many of them are going to fight it, and they probably are not too unhappy with it, and yet they would not have voluntarily offered it.

So some leadership can be exercised there, I think.

One of the ways of getting agreements is not just to invite people to come. You have to do a little more than that. What we will offer you is this, and after discussion at some length and the people feel they don't really want to fight it, and then they probably secretly are going to be not too unhappy with it, and yet they can volunteer.

JUDGE FULD: I think we have the preliminaries on what we are to do.

MR. LEVINE: If I may just raise, I received a letter from Alexander Hoffman, who is the Chairman of the Copyright Committee of the American Association of Publishers, Bell and Linden were two major publishers. In addition to asking for an extension until May 23d, they also said, "We would also like to urge that you clarify your request for guidelines asking all of the interested parties to prepare suggested guidelines for Section 108(g)(2) only. This is the subject to which the parties have devoted most of their attention."

When CONTU passed the resolution at the last meeting, it was prior to the House markup of the new language of 108(g)(2) and it was broadened to be not for only 108(g)(2), but guidelines for photocopying which was not at that time clear as to how 108 would

read. And the question is, since 108 (g)(2) is, in fact, in the area of controversy, whether we should proceed according to the suggestion in 108 (g)(2) rather than as someone suggested to meet guidelines as to the size of the sign that has to be placed next to a coin-operated photocopying machine.

MR. LACY: I think we have a somewhat different situation, and I would suggest broadening the last line on photocopying. At that time the subcommittee had not yet addressed itself or at least delayed in addressing itself to 107, 108 and 109, and we were volunteering, and indeed out of good offices how to deal with the whole complex of issues. The subcommittee itself subsequently made certain changes in 107 and 108, and in effect said, "That is all we are going to do statutorily," and that part of our total offer to do whatever we could about library photocopying in general was, in effect, accepted by the subcommittee in regard to developing guidelines for 108 (g)(2). So it seems to me that the Committee is sort of mired in its report.

MR. DIX: Mr. Chairman, am I right in thinking that the produce in all this might be documents something like the agreement among the authors, the publishers and the educational community itself which I guess we all are aware of. I have not

heard any discussion about that here. Has that been --

MR. LEVINE: That was the suggestion.

MR. DIX: Yes. Okay.

JUDGE FULD: Are there any further comments or further discussion?

(No response).

JUDGE FULD: I think that completes the agenda for today.

Do you have anything else to add in that respect?

MR. LEVINE: I can announce since we have got a couple of minutes that the full House Judiciary Committee on Tuesday approved the extension for the authorization for further appropriations for CONTU, and the Senate Judiciary Committee yesterday, on Wednesday, approved the authorization. So it now goes to the House and Senate floors and presumably with no difficulty will be passed unanimously in both houses.

JUDGE FULD: If there will be no more questions, discussion, or comments, we will adjourn until tomorrow at 9:30.

(Whereupon, the proceedings in the above-entitled matter adjourned at approximately four o'clock, p. m., to be resumed at 9:30 o'clock, a. m., Friday, May 7th, 1976).

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